

# Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia and from Australia, with general remarks to the classification and morphology of the Tetrigidae and descriptions of new genera and species from New Guinea and New Caledonia

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**Abstract:** A key for the identification of the subfamilies of Tetrigidae is revised. The South-East Asian genera and species of the Cladonotinae are taxonomically reviewed and a key is provided for the identification of the genera. A checklist is given for all genera, species and subspecies. Six new genera, *Boczkitettix* gen. nov., *Devriesetettix* gen. nov., *Ichikawatettix* gen. nov., *Ingrischitettix* gen. nov., *Planotettix* gen. nov., *Willemsetettix* gen. nov., and 36 new species, *Boczkitettix manokwariensis* sp. nov., *Cladonotella riedeli* sp. nov., *Dolatettix hochkirchi* sp. nov., *Dolatettix lehmanni* sp. nov., *Eurymorphopus bolivariensis* sp. nov., *Gestroana bayerriveriensis* sp. nov., *Gestroana cycloperensis* sp. nov., *Gestroana flasbarthi* sp. nov., *Gestroana gressitti* sp. nov., *Gestroana karimuiensis* sp. nov., *Gestroana kleukersi* sp. nov., *Gestroana moanemaniensis* sp. nov., *Gestroana morobensis* sp. nov., *Gestroana mounthagensis* sp. nov., *Gestroana pannosa* sp. nov., *Gestroana sedlaceki* sp. nov., *Gestroana willemsei* sp. nov., *Gestroana yapenensis* sp. nov., *Ichikawatettix detzeli* sp. nov., *Ichikawatettix kleinertae* sp. nov., *Ingrischitettix mountbilalaensis* sp. nov., *Planotettix astrolabebayensis* sp. nov., *Planotettix biroi* sp. nov., *Planotettix buergersi* sp. nov., *Planotettix cycloperensis* sp. nov., *Planotettix fartmanni* sp. nov., *Planotettix karubakensis* sp. nov., *Planotettix maai* sp. nov., *Planotettix mountbaduriensis* sp. nov., *Planotettix planus* sp. nov., *Planotettix riedeii* sp. nov., *Willemsetettix laeensis* sp. nov., *Willemsetettix maai* sp. nov., *Willemsetettix oriomoensis* sp. nov., *Willemsetettix wauensis* sp. nov., *Willemsetettix willemsei* sp. nov., are described. New combinations and revised status include *Boczkitettix borneensis* (Bolívar, 1887) comb. nov., *Devriesetettix dorreus* (Hancock, 1909) comb. nov., *Gestroana bicristulata* (Günther, 1938) comb. nov., *Holoarcus intermedius* (Willemse, 1932) comb. nov., *Holoarcus truncatus* (Hancock, 1909) comb. nov., *Ichikawatettix exsertus* (Günther, 1938) comb. nov., *Piezotettix sulcatus* (Bolívar, 1887) comb. nov. The following new synonyms are established: *Xistrella* Bolívar, 1909 = *Pseudogignotettix* Liang, 1990 syn. nov., *Cladonotella beccarii* (Bolívar, 1898) = *Cladonotella insulana* Willemse, 1961 syn. nov. One new name is proposed: *Holoarcus ferwillemsei* nom. nov.

**Key words:** Orthoptera, Tetrigidae, Cladonotinae, identification, New Guinea, New Caledonia, Australia, Philippines, Malaysia, Indonesia, taxonomy, revision, new genera, new species, new synonymy, new combinations, new name.

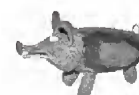
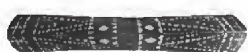
## Introduction

There are about 1750 known species within the family of Tetrigidae. They can be located worldwide and populate almost all climatic zones from taiga to rainforest (deserts excluded). The only regional exception is New Zealand where species of Tetrigidae has yet not been found. Tetrigidae can be clearly identified by their pronotum, which typically extends far over the body. This feature is clearly unique and proves the allocation of the species

without doubt.

This work examines the Tetrigidae of New Guinea and adjacent islands within the scope of a complete revision of South-East Asian genera of Cladonotinae. The bases for this paper are the works of Günther (1938a) and Blackith (1992). Günther examined the known genera of Cladonotinae except those of the Americas. Blackith later translated and slightly edited Günther's identification key.

A classification of the family of Tetrigidae into subfamilies is difficult and initially poses a big



hurdle for the interested entomologist. This work is intended to be a start for better understanding of the subject matter with an identification key for all subfamilies and for the Cladonotinae of this particular region.

So far there are no references to the ecology for the examined species.

### Material and methods

This research is based upon an analysis of considerable material of a variety of museums, displaying a multitude of relevant types; as well as, of course, the published literature. During a study trip in 2004 to Papua New Guinea, I was able to examine the fauna of Tetrigidae at different locations.

With the exception of gender and size, males and females of all reviewed species do not show dimorphism and are therefore not treated separately. Colouring may vary considerably within a species; it has however no consequence for diagnosis.

While determining the paratypes, I followed an individual numbering system (e.g. 3/14).

The following measurements are generally recorded:

Pronotum length: in dorsal view in midline from the anterior to the posterior margin (Plate 64 fig. 1).

Pronotum lobe width: in dorsal view the distance between the most extended margins of the ventral projections (Plate 64 fig. 2).

Pronotum height: in lateral view from the ventral margin of the lateral lobes vertical upwards to the dorsal margin of the pronotum (Plate 64 fig. 3).

Postfemur length: in lateral view the greatest length from the tip of the dorso-basal lobe to the end of the knee (Plate 64 fig. 4).

Postfemur width: in lateral view the greatest width (height) (Plate 64 fig. 5).

Tegmen length: in lateral view the length of the hardened part which is in situ visible beneath the pronotum (Plate 64 fig. 6).

Hind wing length: from the base of the visible part of the tegmen to the apex of the hind wing (Plate 64 fig. 7).

Vertex width: in dorsal view between the hind margins of the lateral carinae of the vertex and including the carinae (Plate 64 fig. 8).

Eye width: in dorsal view from just behind the hind margins of the lateral carinae outwards finding the longest diameter (Plate 64 fig. 9).

For most localities I identify the geographical

coordinates as well as possible and mark them with square brackets.

### Acronyms for scientific collections:

AMS – Australian Museum, Sydney, New South Wales, Australia;

ANIC – Australian National Insect Collection, CSIRO, Canberra City, Australian Capital Territory, Australia;

ANSP – Academy of Natural Sciences, Philadelphia, Pennsylvania, U.S.A.;

BMNH – The Natural History Museum, formerly British Museum (Natural History), London, United Kingdom;

BPBM – Bernice P. Bishop Museum, Honolulu, Hawaii, U.S.A.;

CDT – Collection Dmitry Telnov, Rīga, Latvia;

DORSA – Digitized Orthoptera Specimens Access, hold by the Zoologisches Forschungsmuseum Alexander Koenig, Bonn, Germany;

HNHM – Hungarian Natural History Museum, Budapest, Hungary;

IRSNB – Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgique;

LEMQ – Lyman Entomological Museum, McGill University, Quebec, Canada;

MBBJ – Museum Zoologicum Bogoriense, Bogor, Indonesia;

MCZ – Harvard University, Museum of Comparative Zoology, Cambridge, Massachusetts, U.S.A.;

MHNG – Muséum d'Histoire Naturelle, Geneva, Switzerland;

MNCN – Museo Nacional de Ciencias Naturales, Madrid, Spain;

MNHN – Muséum National d'Histoire Naturelle, Paris, France;

MNSL – Naturkundemuseum, Leipzig, Germany;

MSNG – Museo Civico di Storia Naturale “Giacomo Doria”, Genova, Italy;

MZPW (Museum Stettin) – Polish Academy of Science, Museum of the Institute Zoology, Warszawa, Poland (here: Collection of the former Museum Stettin);

NCB-RMNH – Nederlands Centrum voor Biodiversiteit (Dutch Centre for Biodiversity, formerly Nationaal Natuurhistorisch Museum Naturalis), Leiden, the Netherlands;

NHME – Natuurhistorisch Museum, Maastricht, The Netherlands;

NHRS – Naturhistoriska Riksmuseet, Stockholm, Sweden;

NMW – Naturhistorisches Museum Wien, Austria;

NZSI – Zoological Survey of India, National Zoological Collection, Kolkata, India;

OUMNH – University Museum of Natural History, Oxford,



United Kingdom;  
QM – Queensland Museum, South Brisbane, Queensland, Australia;  
SMSM – Sarawak Museum, Kuching, Sarawak, Malaysia;  
SMTD – Staatliches Museum für Tierkunde, Dresden, Germany;  
UCDC – University of California, R.M. Bohart Museum of Entomology, Davis, California, U.S.A.;  
UMB – Übersee-Museum, Bremen, Germany;  
ZFMK – Zoologisches Forschungsmuseum Alexander Koenig, Bonn, Germany;  
ZIN – Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia;  
ZMHU – Zoologisches Museum der Humboldt Universität, currently Museum für Naturkunde der Humboldt-Universität zu Berlin, Berlin, Germany;  
ZSM – Zoologische Staatssammlung, Munich, Germany.

### Morphology

Based on the work of Devriese (1999) I named all necessary morphological characters in the following figures.

### Subfamilies

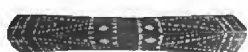
In his epochal work of 1887, Bolívar divided the family of Tetrigidae in 7 sections: Cleostratae, Cladonotae, Scelimenae, Metrodora, Tettigiae, Batrachideae and Tripetalocerae. Hancock added the Discotettigiae and Bufonidae (1907), as well as the Lophotettigiae (1909) to the Sectiones. A division that despite of its' shortcomings is still in place today. Günther (1939) changed the until then used name Sectio Metrodora to Sectio Amorphopi. Steinmann withdrew the older systematic categories such as sections and postulates 10 subfamilies instead: Cladonotinae, Scelimeninae, Metrodorinae, Tetriginae, Batrachinae in 1962; Lophotettiginae (1969) and Tripetalocerinae, Discotettiginae and Cleostratinae (1970a); Bufonidinae (1970b). Steinmann postulates the Tetriginae as a synonym of Tetricinae (1970b). Later authors, such as Otte, do not agree and Otte (1997) establishes 11 subfamilies inclusive of the Tetriginae, of which the subfamily of Cassitettiginae was later synonymized (Podgornaja, 2001). Otte does not list the Bufonidinae and falsely postulates the Amorphopinae based on Podgornaja (1986) with only two genera as a separate subfamily. But Podgornaja used 1992 in her identification key the name Metrodorinae for the Amorphopinae.

I use the name Metrodorinae (Type species: *Metrodora rana* Bolívar, 1887) for this subfamily until further revisions may establish a new system.

Podgornaja (1992) did not consider the subfamily of the Bufonidinae and Otte (1997) assigned them to the Tetriginae without providing a reason. I do not agree, since the morphology shows strong deviations. I allocate the Bufonidinae to the Cladonotinae due to their broadened scutellum. To postulate a separate subfamily of Bufonidinae would be inappropriate, because of the multitude of forms in these genera. If one were to establish such a separate subfamily, there would be many more subfamilies of genera with many different pronounced features. A later revision that does not follow the problematic feature of the broadened scutellum would very likely assign the genera differently. The largest number of the to-date described species are found within the Scelimeninae, Metrodorinae and Tettiginae. Allocations to these subfamilies are extremely difficult, since the characteristics used are not specific and very subtle. Discotettiginae (3 genera) and Lophotettiginae (2 genera) are based upon very rare attributes and encompass only few species. The same is valid for Cleostratinae (1 genus) and Tripetalocerinae (3 genera). The division in sections, or today's subfamilies, does in many cases not correspond with the true relationship, which Günther and other authors often remark in their works, and I agree with. Due to the lack of a complete revision however, Günther himself made use of the established allocations. Because of the described shortcomings, a complete revision of the subfamilies would be an important task. However, it poses enormous requirements on the researchers. For those who are studying, or wish to study the tetrigids, it is essential to identify the correct access point to the proper allocations of genera. This enables research of this family in greater depth.

The above explanations lead me to use the system of 9 subfamilies and their definitions:

Batrachideinae Bolívar, 1887  
Cladonotinae Bolívar, 1887  
Cleostratinae Hancock, 1907  
Discotettiginae Hancock, 1907  
Lophotettiginae Hancock, 1909  
Metrodorinae Bolívar, 1887  
Scelimeninae Hancock, 1907  
Tetriginae Serville, 1838  
Tripetalocerinae Bolívar, 1887





### Key to the subfamilies of the Tetrigidae

The following identification key should enable an allocation to the subfamilies. It is based on the work of Podgornaja (1992).

- 1 Antennae filiform or thicker, exceptional the segments flattened (but see also in Metrodorinae: *Ophiotettix* and *Andriana*) ..... 2
- All or 2-3 subapical segments considerable broadened and flattened ..... 7
- 2 The medial ocellus between the eyes (one genus from the Philippines) ..... Cleostratinae
- The medial ocellus below the lower margin of the eyes ..... 3
- 3 Dorsal margin of the anterior and middle femora with a clear furrow ..... Batrachideinae
- Dorsal margin of the anterior and middle femora with a well developed carina ..... 4
- 4 Fascial carina of the frontal costa considerably widened. They enclose a broadened scutellum (broader than the scapus) ..... Cladonotinae
- Fascial carina of the frontal costa diverge a little or runs parallel ..... 5
- 5 The lateral lobes directed downwards and contiguous to the body, arched in different ways (not transverse truncated) ..... Tetriginae
- The lateral lobes directed sideways (in rare cases downwards) as an acute triangle process or an acute spine or a transverse truncated process ..... 6
- 6 The lateral lobes directed sideways as an acute triangle process or a long acute spine ..... Scelimeninae
- The lateral lobes directed sideways (in rare cases downwards) as a transverse truncated process .. Metrodorinae
- 7 Only 2 or 3 subapical segments considerably broadened and flattened or foliaceous ..... Discotettiginae
- All antenna segments, with the exception of basal and apikal segments, clearly flattened ..... 8
- 8 Antenna segments flattened triangularly. Head produced conical ..... Tripetalocerinae
- Antenna segments flattend trapezoidal or rhomboidal. Head not produced (two genera from South America) ..... Lophotettiginae

### Key to the Cladonotinae of South East Asia and Australia

The following genera of Cladonotinae from the Asiatic mainland and other parts of the world were not considered in this key:

- Acmophyllum* Karsch, 1890 (Africa)
- Afrolarcus* Günther, 1979 (Africa)
- Antillotettix* Perez-Gelabert, 2003 (Caribbean)
- Aspiditettix* Liang, Chen, Li, Chen, 2009 (China)
- Astyalus* Rehn, 1939 (Africa)
- Austrohancockia* Günther, 1938 (Indochina, South China, Taiwan)
- Bahorucoettix* Perez-Gelabert, Hierro, Otte, 1998 (Caribbean)
- Bidentatettix* Zheng, 1992 (China, India, Vietnam)
- Choriphyllum* Serville, 1838 (Caribbean)
- Cladonotus* Serville, 1838 (Sri Lanka)
- Cladoramus* Hancock, 1907 (Africa)
- Cota* Bolívar, 1887 (Southern America)
- Cubanotettix* Perez-Gelabert, Hierro, Otte, 1998 (Caribbean)
- Cubonotus* Perez-Gelabert, Hierro, Otte, 1998 (Caribbean)
- Dasyleurotettix* Rehn, 1904 (Africa)

- Deltonotus* Hancock, 1904 (South India, Sri Lanka, China, Vietnam)
  - Eleleus* Bolívar, 1887 (South America)
  - Fieberiana* Kirby, 1914 (East India)
  - Gibbotettix* Zheng, 1992 (China)
  - Gignotettix* Hancock, 1909 (Sri Lanka)
  - Haitianotettix* Perez-Gelabert, Hierro, Otte, 1998 (Caribbean)
  - Hancockella* Uvarov, 1940 (South India)
  - Hippodes* Karsch, 1890 (Africa)
  - Hottettix* Perez-Gelabert, Hierro, Otte, 1998 (Caribbean)
  - Microthymochares* Devriese, 1991 (Madagascar)
  - Morphopoides* Rehn, 1930 (Africa, Madagascar)
  - Morphopus* Bolívar, 1905 (Africa)
  - Mucrotettix* Perez-Gelabert, Hierro, Otte, 1998 (Caribbean)
  - Oxyphyllum* Hancock, 1909 (North India)
  - Pantelia* Bolívar, 1887 (Africa)
  - Paulytettix* Devriese, 1999 (Africa)
  - Pelusca* Bolívar, 1912 (Africa)
  - Phyllotettix* Hancock, 1902 (Caribbean)
  - Pseudepitettix* Zheng, 1995 (China)
  - Pseudogignotettix* Liang, 1990 (China)
- Note: The 2 species are based upon the descriptions of larvae. On the drawings of the description plates



of *Pseudogignotettix emeiensis* Zheng, 1995 and *Pseudogignotettix guandongensis* Liang, 1990 the larval stages can be clearly recognized by the missing incision between the antegenicular teeth and the knee of the hind femur. Mr. Storozhenko (by letter) stated, that both species are possibly the last instar of *Xistrella* spec. and I agree with. Herewith I synonymize *Xistrella* Bolívar, 1909 with *Pseudogignotettix* Liang, 1990 **syn. nov.** The descriptions of both species are questionable and require further proof.

*Royitettix* Devriese, 1999 (Africa)

*Sanjetettix* Devriese, 1999 (Africa)

*Seyidotettix* Rehn, 1939 (Africa)

*Sierratettix* Perez-Gelabert, Hierro, Otte, 1998

(Caribbean)

*Tettilobus* Hancock, 1909 (India, Sri Lanka)

*Thymochares* Rehn, 1930 (Madagascar)

*Tiburonotus* Perez-Gelabert, Hierro, Otte, 1998 (Caribbean)

*Trachytettix* Stål, 1876 (Africa)

*Truncotettix* Perez-Gelabert, Hierro, Otte, 1998 (Caribbean)

*Trypophyllum* Karsch, 1890 (Africa)

*Tuberfemurus* Zheng, 1992 (China)

*Typophyllum* Karsch, 1890 (Africa)

*Xerophyllum* Fairmaire, 1846 (Africa)

*Yunnantettix* Zheng, 1995 (China)

The following identification key is based upon the key of Günther (1938a).

- 1 Pronotum with strongly raised median carina, usually with leaf-like compression; dorsal silhouette in profile never with sharp teeth or saw-edged in profile ..... 2
- Pronotum never evenly compressed in a leaf-like pattern, median carina in profile not regularly elevated; or: compressed to the thickness of a leaf and produced over the head or with upward projecting processes in the anterior part of the pronotum ..... 10
- 2 Organs of flight present ..... 3
- Organs of flight absent ..... 4
- 3 Antennae very long. Brachyptereous. Borneo ..... *Paraphyllum* Hancock, 1913
- Antennae very short. Macroptereous. Borneo ..... *Stegaceps* Hancock, 1913
- 4 The elevated foliaceous thin pronotum, seen in profile, with a distinct angle at the highest point of the dorsal line ..... 5
- Pronotum with more or less evenly rounded or irregular dorsal silhouette ..... 7
- 5 The shield-like structure bordering the frontal carena pear-shaped or upright heart-shaped (drawn in Bolívar, 1887, fig. 2a) with the greatest breadth above the mid-point of its length. Highest elevation of the pronotum not exceeding the hind femora, above the mid-coxae. Philippines ..... *Hymenotes* Westwood, 1837
- Frontal shield-like structure with the greatest breadth at or below the mid-length (drawn in Bolívar, 1887, fig. 3a; Plate 70, fig. 3) ..... 6
- 6 Highest elevation of the pronotum often behind the hind coxae; the pronotum not exceeding the hind femora. Philippines ..... *Hypsaeus* Bolívar, 1887
- Highest elevation of the pronotum before the mid coxae, sometimes even above the head; the pronotum slightly exceeding the hind femora. Philippines ..... *Misythus* Stål, 1877 (partim)
- 7 Dorsal line of the pronotum, seen from above, forked, at least in the anterior half. New Guinea ..... 8
- Dorsal line of the pronotum unforked or nearly unforked. Not from New Guinea ..... 9
- 8 In lateral view a well visible frontal horn at the tip of the fastigium (Plate 71 fig. 7). New Guinea ..... *Dolatettix* Hancock, 1907
- No frontal horn at the tip of the fastigium. New Guinea ..... *Holoarcus* Hancock, 1909
- 9 Pronotum slightly exceeding the hind femora. Philippines ..... *Misythus* Stål, 1877 (partim)
- Pronotum not exceeding the hind femora. Philippines ..... *Piezotettix* Bolívar, 1887
- 10 External lateral carinae emarginated inside. Samoa, New Caledonia ..... *Nesotettix* Holdhaus, 1908
- External lateral carinae not emarginated inside ..... 11
- 11 Pronotum and body conspicuously flattened, hind femur more or less inclined with lateral curved lappets. New Guinea and New Caledonia ..... 12
- Pronotum and body not conspicuously flattened ..... 13
- 12 Micropronotal. Internal lateral carinae absent. New Guinea ..... *Planotettix* gen. nov.
- Brachypronotal. Internal lateral carinae present. New Caledonia ..... *Eurymorphopus* Hancock, 1907
- 13 Very long and macropronotal. Hind wings long ..... *Gavialidium* Saussure, 1862



- Short and without long hind wings ..... 14
- 14 Vertex, seen from above, at least produced in front of the eyes as an evenly broad, distinctly blunt, triangular, or rounded process with distinct transverse carinae. Prozonal carinae very short or almost absent. Vietnam, Borneo and New Guinea ..... *Epitettix* Hancock, 1907
- Vertex, seen from above, not a blunt or clearly rounded process produced before the eyes. Lateral carinae short. Transverse carinae absent. Prozonal carinae especially for males long and elevated. Borneo, New Guinea ..... 15
- 15 Pronotum with a more or less flat surface and one small exaltation of the median carina in line of the shoulders, but without bigger humps ..... 16
- Pronotum not flat, at least in the anterior part often irregular, considerably humpy, or with one or more short, upper multi-peaked ridges on the median carina or with some considerable elevations ..... 18
- 16 Head exerted over the pronotum, with globular projecting eyes. New Guinea ..... *Ichikawatettix* gen. nov.
- Head not exerted. Eyes not conspicuously globular ..... 17
- 17 Median carina does not reach the posterior margin of the pronotum. Australia ..... *Tepperotettix* Rehn, 1952
- Median carina reaches the posterior margin of the pronotum. New Guinea ..... *Devriesetettix* gen. nov.
- 18 Whole pronotum broadly rounded. Median carina nearly absent. New Guinea ..... *Bufonides* Bolívar, 1898
- Pronotum not broadly rounded. Medial carina present ..... 19
- 19 Pronotum, in lateral view, at least backwards to the middle flat or consistently higher rounded ..... 20
- Pronotum at least in the posterior part irregular, considerably humpy, or with one or more shortened, multi peaked ridges on the median carina or with some considerable elevations ..... 24
- 20 Apex of the anterior margin of the pronotum, seen from above, semicircular. Philippines .... *Diotarus* Stål, 1877
- Apex of the anterior margin of the pronotum, seen from above, consistently pointed cephalad ..... 21
- 21 Lateral carinae running with a sharp corner to the medial carina. New Guinea ..... *Ingrischitettix* gen. nov.
- Lateral carinae running parallel or slightly curved inwards to the medial carina ..... 22
- 22 Fastigium, in lateral view, visible before the eyes but not projecting forward. New Guinea .....  
..... *Pseudohyboella* Günther, 1938
- Fastigium, in lateral view, projecting forward ..... 23
- 23 Small species, pronotum length < 6 mm. New Guinea ..... *Willemsetettix* gen. nov.
- Large species, pronotum length > 8mm. Borneo, New Guinea ..... *Boczkitettix* gen. nov.
- 24 Anterior margin of the pronotum not or even less produced over the head ..... 25
- The laterally compressed process of the leading edge of the pronotum considerably produced forward and above far beyond the head, in lateral view, irregularly formed. Philippines ..... *Misythus* Stål, 1877 (partim)
- 25 Pronotum at the end, seen from above, acute (or acutely rounded). Anterior region of the pronotum irregularly raised, the posterior region irregularly rugose. Antennal segments very short and thick, at the most three times as long as broad. Borneo, Sumatra and India ..... *Potua* Bolívar, 1887
- Pronotum at the end, seen from above, rounded, often bifurcated; mid-antennal segments usually strongly elongated ..... 26
- 26 From Australia ..... *Peraxelipa* Sjöstedt, 1931
- Not from Australia ..... 27
- 27 Ventral margin of the infrascapular area strongly curved. Sulawesi ..... *Tondanotettix* Willemse, 1928
- Ventral margin of the infrascapular area straight or a little curved ..... 28
- 28 Antennae inserted less than half a diameter of an antennal groove below the lower margin of the eyes. Prozona. Java and New Guinea ..... *Cladonotella* Hancock, 1909
- Antennae inserted more than one diameter of an antennal groove below the lower margin of the eyes. New Guinea ..... *Gestroana* Berg, 1900

## Descriptions

### ***Boczkitettix* gen. nov.**

Type species: *Boczkitettix borneensis* (Bolívar, 1887) **comb. nov.**

Derivatio nominis: Patronymic. The genus is named after Robert Berthold Boczki, a famous German entomologist and a good friend.

Description: Important characteristics are: anterior border of the fastigium, in lateral view, broadly rounded and projected before the eyes. Scutellum broadened. Antennae inserted below the lower margin of the eyes. Pronotum tectiform with a low leaf-like part at the dorsal margin. Anterior process of the pronotum extending over the head; dorsal margin of the pronotum slowly descending



posteriorly, with just a minimal concave area on each side of the median carina. Furcation of the dorsal line of the pronotum, seen from above, closed, only in the anterior part a very narrow furcation visible. Posterior process of the pronotum narrow and slightly rounded. Infrascapular area with a low concave part above the mid-femora. Brachypronotal. Flight organs absent. Last article of the tarsi conspicuously shorter than the first.

Differential diagnosis: The type species does not belong to *Dolatettix* Hancock, 1907. *Boczkitettix* gen. nov. does not have a well visible frontal horn on the tip of the fastigium. The pronotal crest is low and nearly tectiform but not foliaceous. The dorsal line of the pronotum is unforked or nearly unforked in *Boczkitettix* gen. nov. Even in *Holoarcus* Hancock, 1909 and *Piezotettix* Bolívar, 1887 the furcation of the dorsal line of the pronotum is well visible and the pronotum is conspicuously foliaceous. *Diotarus* Stål, 1877 is related to *Boczkitettix* gen. nov. but this genus has a broadly obtuse posterior apex of the pronotum. In *Boczkitettix* gen. nov. it is small and rounded. The new genus is very closely related to *Deltonotus* Hancock, 1904, but the species of *Deltonotus* Hancock, 1904 are micropronotal. The anterior apex of pronotum in frontal view in *Deltonotus* Hancock, 1904 is slightly broader than in *Boczkitettix* gen. nov. *Willemsetettix* gen. nov. is closely related to *Boczkitettix* gen. nov., but the species are smaller and the anterior apex of the pronotum is straight or extending slightly above the head (only *Willemsetettix laeensis*). In *Boczkitettix* gen. nov. the anterior apex of the pronotum is reaching the anterior border of the eyes or is extending over the head.

Distribution: Borneo and New Guinea.

***Boczkitettix borneensis* (Günther, 1935) comb. nov.** (Plate 65 figs 1, 3, 5)

*Dolatettix borneensis* Günther, 1935 [description].

Holotype ♂ MBBJ, MALAYSIA: Borneo, H. C: Siebers.

Allotype ♀ SMTD, MALAYSIA: Borneo, Midden O. Borneo, 17.X.1925. H. C. Siebers.

Additional material: 1♀ NHME, MALAYSIA: N. Borneo, Bettotan, Nr. Sandakan, 3.VIII.1927.

***Boczkitettix manokwariensis* sp. nov.** (Plate 65 figs 2, 4, 6-9)

Holotype ♀ BPBM, WEST PAPUA: Manokwari [0°52'S 134°05'E], 75 m, 19.VII.1957, leg. D. Elmo Hardy.

Paratypes ♂ (1/3) BPBM, WEST PAPUA: Manokwari [0°52'S 134°05'E], 75 m, 18.VII.1957, leg. D. Elmo Hardy, deposited in ZFMK; ♂ (2/3) BPBM, WEST PAPUA: Manokwari [0°52'S 134°05'E], 75 m, 21.VII.1957, leg.

D. Elmo Hardy, deposited in NCB-RMNH; ♂ larva (3/3) BPBM, WEST PAPUA: Manokwari [0°52'S 134°05'E], 75 m, 24.VII.1957, leg. D. Elmo Hardy, deposited in BMNH.

Derivatio nominis: The species is named after the type locality.

Measurements, holotype ♀: Pronotum length 11.05 mm, pronotum lobe width 5.46 mm, pronotum height 3.9 mm, postfemur length 8.84 mm, postfemur width 3.45 mm, vertex width 1.26 mm, eye width 0.72 mm. Paratypes ♂♂: pronotum length 8-8.71 mm, pronotum lobe width 4.35 mm, pronotum height 2.85-3.15 mm, postfemur length 6.56-6.88 mm, postfemur width 2.9 mm, vertex width 0.98-1.02 mm, eye width 0.56-0.64 mm.

Description, holotype ♀: Head lower than the pronotum. Fastigium, in dorsal view, triangularly projecting before the eyes. Fossulae shallow. Vertex broader than an eye. Transverse carinae obsolete. Lateral carinae short, curved inwards, not reaching the medial carina. In lateral view visible before the eyes. Medial carina in the posterior part obsolete, initiated in line of the anterior margin of the eyes, arched and projected before the eyes. Frontal costa, in lateral view, visible before the whole eyes. Fascial carinae in lateral view slightly arched before the antenna. Scutellum, in frontal view, broader than an antennal groove. Furcation of the frontal costa above the superior ocelli, in a line of the middle of the eyes. Eyes, in dorsal view, drop-shaped, touching the anterior margin of the pronotum. Their dorsal margin lower than the fastigium. Antennae short. Upper margin of the antennal grooves in line with the lower margin of the eyes. Pronotum arched, rugose with some short carinulae and tubercles. Pronotum, in frontal view, tectiform. The anterior apex of the pronotum extending over the head until the frontal border of the eyes. Median carina extending to the anterior border. Prozonal carinae very short. Infrascapular area broad, reaching the end of the pronotum. Internal lateral carinae absent. Lateral lobes of the paranota curved laterally. In dorsal view, the lateral lobes angular with a very short and truncated posterior part. Pronotal process surpassing the middle of hind femora, seen from above, the posterior margin straight. The posterior apex of the pronotum flat. Between the external lateral carinae and the median carina concave. Tegmen and hind wings absent. Ventral margin of the anterior and middle femora slightly undulated, the dorsal margin straight. The ventral margin of the middle femora with some short hairs. The second segment of the tarsus short. Hind femora stout (2.5x longer





than wide). Genuic teeth and antegenic teeth small. The dorsal margin of the hind femora finely serrated. Posttibia brown with two white bands. Last article of the tarsi conspicuously shorter than the first. Pulvilli short and obtuse. The third pulvilli shorter than the sum of the first and second. The male with the same characteristics but smaller.

Differential diagnosis: The anterior apex of the pronotum, in lateral view, of *Boczkitettix manokwariensis* does not reach the anterior margin of the head. The apex of *Boczkitettix borneensis* is extending over anterior margin of the head.

Distribution: Only known from the type locality from the north-east of New Guinea.

### ***Bufonides Bolívar, 1898***

Type species: *Bufonides antennatus* Bolívar, 1898.

Differential diagnosis: *Bufonides* Bolívar, 1898 is easily identified by the characteristically broadly rounded pronotum. The median carina is absent and the anterior border of the pronotum is extended in a horn above the head. The tegminal and ventral sinuses are absent. It is possibly related to *Diotarus* Stål, 1877 or *Misythus* Stål, 1877 (Günther 1934). Further research is required to determine the correct allocation.

### ***Bufonides antennatus* Bolívar, 1898** (Plate 66)

Lectotype ♂ MSNG, PAPUA NEW GUINEA: Nuova Guinea, [Western Prov.?], Fly River, 1876-77, leg. L. M. D'Albertis.

Paralectotypes 1♀ (1/3) MSNG, PAPUA NEW GUINEA: Nuova Guinea, [Western Prov.?], Fly River, 1876-77, leg. L. M. D'Albertis; 1♂ larva (2/3) MSNG, WEST PAPUA: Paumomu River, Loria, XI - XII.1892; 1♀ (3/3) MNCN, WEST PAPUA: Paumomu River, Loria, XI - XII.1892, no. 160.

The lectotype and the paralectotypes are designated for the first time.

Additional material: 13♀, 8♂, 1♀ larva, 1♂ larva BPBM, PAPUA NEW GUINEA: [Western Highlands Prov.], Fly River, Kiunga [6°07'S 141°18'E], 35 m, VIII.1969, leg. J. & M. Sedlacek.

Measurements lectotype ♂: Pronotum length 9.36 mm, pronotum lobe width 5.2 mm, pronotum height 3.77 mm, postfemur length 6.63 mm, postfemur width 2.86 mm, vertex width 0.72 mm, eye width 0.8 mm. Paralectotype 1/3 ♀: pronotum length 10.14 mm, pronotum lobe width 5.98 mm, pronotum height 4.81 mm, postfemur length 7.67 mm, postfemur width 3.38 mm, vertex width 0.88 mm, eye width 0.82 mm.

Description and differential diagnosis: see Hinton (1940).

Distribution: *Bufonides antennatus* is found in the south of New Guinea.

Note: I did not examine the specimens from Kokoda and from Mt. Tafa (leg. Cheesman) in BMNH but think that the specimens from Kokoda are the holotype and the paratypes of *Bufonides uvarovi* Hinton, 1940. I did not examine the ♂ from the Mamberamo River (Museum Buitenzorg) but think that Günther's (1936) identification is questionable because he was incorrect with the allocation of several specimens of *Bufonides antennatus*, *Bufonides sellatus* and *Bufonides uvarovi*. Both are only found in the south of New Guinea and not at the Mamberamo River in north-east of New Guinea.

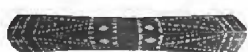
### ***Bufonides sellatus* Hinton, 1940**

Holotype ♀ BMNH, WEST GUINEA: Humbolt Bay Dist., Puksum Dist., West of Tami River [Jayapura Area, Walckenaer Bay], 06.1937, leg. W. Stüber.

Paratype ♀ BMNH, WEST GUINEA: Humbolt Bay Dist., Puksum Dist., West of Tami River [Jayapura Area, Walckenaer Bay], 06.1937, leg. W. Stüber.

Additional material: WEST PAPUA: 1♂, 1♀ BPBM, Geelvink Bay, Nabire [3°22'S 135°28'E], 1962, leg. Sedlacek/Gressitt; 1♀ ZSM, Cyclops-Mountains, Jayapura, Sentani [2°36'S 140°37'E], 300 m, 19.-21. IX.1990, leg. A. Riedel; 1♀, 1♀ larva BPBM, Cyclops Mountains, Ifar [2°34'S 140°31'E], 300-500 m, VI.1962, leg. Sedlacek/Gressitt; 1♀ NCB-RMNH, [Jayapura Area], Ampas, Bewani R.-territ. [3°30'S 140°50'E], 200 m, 1939, leg. W. Stüber; 1♀, 1♂ NCB-RMNH, Hollandia [Jayapura], VII.1938, leg. L. J. Toxopeus; 2♂ BPBM, Bodem 11 km SE of Oberfaren [1°58'S 138°44'E], 100 m, 17.VII.1959, leg. T. C. Maa; 1♂ BPBM, Genjam 40 km W of Hollandia [2°46'S 140°12'E], 100-200 m, 1.-10. III.1960, leg. T. C. Maa; 1♀, 1♂ NCB-RMNH, Bernhard Camp B [3°29'S 139°13'E], 100 m, 7. and 10.IV.1939, leg. L. J. Toxopeus; 1♀ NCB-RMNH, Brunbeek, 17.V.1910, leg. P. v. Kampen.

PAPUA NEW GUINEA: 1♀ larva, 3♂ larvae SMTD, [West Sepik Prov.] Toricelli Gebirge, 600-780 m, leg. Schlaginhaufen (*Bufonides antennatus* det. Günther); 1♀ BPBM, [Western Prov.], Feramin [5°10'S 141°40'E], 1450 m, 29.VIII.1963, leg. R. Straatman; 1♀ larva UMB, [East Sepik Prov.], April River, Kupfer-Camp, 50 km SW Ambunti, 5.III.1973, leg. Hohmann; 1♀ BPBM, [East Sepik Prov.] Sepik District, Wewak [3°33'S 143°38'E], 300-500 m, 26.VI.1961, leg. J. L. & M. Gressitt; 1♀ BPBM, [East Sepik Prov.] Torricelli Mountains, Mobitei, 750 m, 16.-22.IV.1959, leg. W. W. Brandt; 1♀ OUMNH, [East Sepik Prov.], Lager am Lehmfluss (Nr. 327) [4°43'S 144°07'E], 12.V.1913,



leg. S. Bürgers; 1♀ ZMHU, [East Sepik Prov.], Hauptlager bei Malu (Nr. 242) [4°13'S 142°49'E], 19.I.1913, leg. S. G. Bürgers (*Bufo antennatus* det. Günther); 1♀ larva ZMHU, [East Sepik Prov.], Hauptlager bei Malu (Nr. 247) [4°13'S 142°49'E], 27.I.1913, leg. S. G. Bürgers; 2♀ ZMHU, [East Sepik Prov.], Hauptlager bei Malu (Nr. 248) [4°13'S 142°49'E], 28.I.1913, leg. S. G. Bürgers (1x *Bufo antennatus* det. Günther); 1♀ ZMHU, [East Sepik Prov.], Hauptlager bei Malu (Nr. 308) [4°13'S 142°49'E], III.1913, leg. S. G. Bürgers (DORSA: BXbufantF04) (*Bufo antennatus* det. Günther); 1♀ ZMHU, [East Sepik Prov.], Mäanderberg (Nr. 388) [4°07'S 141°40'E], 1.-10.VII.1913, leg. S. G. Bürgers; 1♀ ZMHU, [East Sepik Prov.], Mäanderberg (Nr. 396) [4°07'S 141°40'E], 10.-20.VII.1913, leg. S. G. Bürgers; 1♀ HNHM, [East Sepik Prov.], Mäanderberg (Nr. 396) [4°07'S 141°40'E], 10.-20.VII.1913, leg. S. G. Bürgers (*Bufo antennatus* det. Günther); 1♀ ZMHU, [East Sepik Prov.], Mäanderberg (Nr. 402) [4°07'S 141°40'E], 21.-30.VII.1913, leg. S. G. Bürgers (*Bufo antennatus* det. Günther); 2♀ ZMHU, [East Sepik Prov.], Lager am Rosensee (Nr. 259) [4°22'S 142°43'E], 10.II.1913, leg. S. G. Bürgers (*Bufo antennatus* det. Günther); 1♀, 1♂ ZMHU, [East Sepik Prov.], Quelllager (Nr. 128) [4°32'S 142°41'E], 13.-6.VIII.1912, leg. S. G. Bürgers (*Bufo antennatus* det. Günther); 2♂ ZMHU, [East Sepik Prov.], Standlager am Aprilfluss (Nr. 200) [4°32'S 142°29'E], 29. - 30.X.1912, leg. S. G. Bürgers (*Bufo antennatus* det. Günther); 2♀ larvae ZMHU, 1♂ larva SMTD, [East Sepik Prov.], Regenberglager (Nr. 330) [4°32'S 142°29'E], 550 m, 8.-15.V.1913, leg. S. G. Bürgers (DORSA: ♂= BXbufantM01; *Bufo antennatus* det. Günther); 1♂ ZMHU, [East Sepik Prov.], Kaiserin Augusta Flussexpedition (Nr.112), leg. S. G. Bürgers (*Bufo antennatus* det. Günther).

Description and differential diagnosis: See Hinton (1940).

Distribution: Found in the north of New Guinea from Nabire in the west to the upper Sepik River system in the east.

#### ***Bufo uvarovi* Hinton, 1940**

Holotype ♂ BMNH, PAPUA NEW GUINEA: [Central Prov.], Kokoda [8°39'S 147°15'E], 1200 ft., VI.1933 (leg. L. E. Cheesman).

Paratypes 5♀, 6♂ BMNH, PAPUA NEW GUINEA: [Central Prov.], Kokoda [8°39'S 147°15'E], 1200 ft., IV., V., VIII, IX, X.1933 (leg. L. E. Cheesman). All specimens have the label "*Bufo antennatus* Bol., K. Gunther det." (Hinton, 1940).

Additional material: PAPUA NEW GUINEA: 1♀, 1♂ SMTD, [Central Prov.], Kokoda [8°39'S 147°15'E], 1200 ft. IX.1933, leg. L. E. Cheesman (*Bufo antennatus*

det. Günther); 1♀ larva BPBM, [Central Prov.], Kokoda [8°39'S 147°15'E], 400 m. 22.III.1956, leg. J. L. Gressitt; 1♀ BPBM, [Morobe Prov.], Morobe Dist., Wau (M.V. Light Trap) [7°20' 146°43'], 1200 m, 29.-30.IX.1963, leg. J. Sedlacek; 1♀, 1♀ larva, 1♂ larva BPBM, [Northern Prov.], Kokoda-Pitoki [8°55'S 147°44'E], 450 m, 23. + 24.III.1956, leg. J. L. Gressitt; 1♀ UMB, [Northern Prov.], Lejo, 15 km WNW Popondetta, 25.V.1973, leg. Hohmann; 1♂ AMS, [Northern Prov.], Mt. Lamington District, VII.1927, leg. C. T. McNamara; 1♀ ANIC, [Northern Prov.], N. Distr., Managalese area, ca. 2500-3000 ft., VIII.1964, leg. R. Pullen; 1♀ ANIC, [Northern Prov.], N. Distr., Mai-u R., SW of Wanigela, VII.1972, leg. R. Pullen; 1♂ ANIC, [Northern Prov.], Popondetta [8°46'S 148°14'E], III.1961, leg. A. Catley; 1♀ ANIC, [Northern Prov.], Popondetta [8°46'S 148°14'E], 22.I.1962, leg. A. Catley; 4♀, 2♂ BPBM, [Northern Prov.], Popondetta (Light Trap) [8°46'S 148°14'E], 25 m, VI.1966, leg. Shanahan-Lippert.

Description and differential diagnosis: see Hinton (1940).

Distribution: Found only in the east of Papua New Guinea.

#### ***Cladonotella* Hancock, 1909**

Type species: *Cladonotella gibbosa* (Haan, 1842).

The genus was established by Hancock, to include two species formerly attributed to the genus *Cladonotus* Saussure, 1862 by Bolívar: *Cladonotella gibbosum* (Haan, 1842) and *Cladonotella beccarii* (Bolívar, 1898). Günther (1938a) designates *Cladonotella gibbosa* (Haan, 1842) as the genotype. The types have been lost.

Description: The plump and wingless species of the genus *Cladonotella* Hancock, 1909 have a high elevated and swollen pronotum between the shoulders. The lateral lobes curved strongly laterally. They are rounded or acute but do not have as a long spine as *Tettilobus*. The genicular and antegenicular teeth are relatively large. The lateral faces of the hind femora are covered with humps (in *Cladonotella beccarii* (Bolívar, 1898) only one). The dorsal and ventral margin of the anterior and middle femora with two lappets at least (in *Cladonotella beccarii* (Bolívar, 1898) only one on the ventral margin).

Differential diagnosis: Very closely related to *Gestrona* but the species of *Cladonotella* Hancock, 1909 are more plump, the prozonal carinae have a greater distance, wider than the distance between the supraocular lobes. *Cladonotella* Hancock, 1909 has a heart-shaped or nearly heart-shaped



elevation on the pronotum and in the posterior third of the pronotum no lengthwise elevation. *Gestroana* Berg, 1900 never has a heart-shaped elevation on the pronotum. The pronotum has a compressed high and spinous elevation up to the posterior third or a bimodal pronotum: in the anterior part bigger and in the posterior part smaller at least minimally compressed elevation lengthwise. *Cladonotella* Hancock, 1909 is also closely related to *Potua* Bolívar, 1887. The antennae of *Potua* Bolívar, 1887 are in comparison to *Cladonotella* Hancock, 1909 distinctly short. *Potua coronata* Bolívar, 1887 has no conical rounded humps on the outside of the hind femora, but the bands on the outside are thick. The ventral margin of the anterior femora only with one lappet. *Potua coronata* Bolívar, 1887 is covered densely with short hairs, *Cladonotella* Hancock, 1909 is not. *Austrohancockia* Günther, 1938 is also related to *Cladonotella* Hancock, 1909. But in this genus the pronotum is not only elevated but broadened laterally.

Distribution: Java and New Guinea.

***Cladonotella beccarii* (Bolívar, 1898)** (Plate 67  
figs 1, 3, 5)

*Cladonotella insulana* Willemse, 1961 **syn. nov.**  
(Plate 67 figs 2, 4, 6)

*Cladonotella beccarii*: Holotype ♀ MSNG, WEST PAPUA: Ramoi [NW Doberai Pen., Lowland], II.1875, leg. O. Beccari.

Additional material: 1♀ ZSM, WEST PAPUA: Manokwari, Gn. Meja, ca. 300 m, 23.-24.IX.1990, leg. A. Riedel; 2♀ OUMNH, NEW GUINEA, leg. Wallace.

Measurements, holotype ♀: Pronotum length 8.71 mm, pronotum lobe width 5.59 mm, pronotum height 4.68 mm, postfemur length 5.72 mm, postfemur width 2.73 mm, vertex width 1.3 mm, eye width 0.48 mm. ♀ ZSM: pronotum length 9.52 mm, pronotum lobe width 5.92 mm, pronotum height 4.9 mm, postfemur length 5.76 mm, postfemur width 2.72 mm, vertex width 1.4 mm, eye width 0.49 mm.

*Cladonotella insulana*: Holotype ♂ NCB-RMNH, WEST PAPUA: Waigeo, 3.VIII.1948, leg. M. A. Lieftinck.

Paratype ♀ NCB-RMNH, WEST PAPUA: Waigeo, 3.VIII.1948, leg. M. A. Lieftinck.

Willemse designates the holotype and the allotype from a series of three specimens. I did not find the types in NCB-RMNH but I located the third specimen (♂) with the same data as the types.

Additional material: 1♂ NCB-RMNH, WEST PAPUA: Waigeo, 3.VIII.1948, leg. M. A. Lieftinck.

Differential diagnosis: I have had the opportunity to examine the holotype of *Cladonotella beccarii* (Bolívar, 1898) from Genova. Willemse did not see this specimen but he gives a redescription of the genus. The description of Willemse (1961), his pictures, and the examination of the third specimen with the same data as the types shows clearly in all characteristics that *Cladonotella insulana* Willemse, 1961 is a synonym of *Cladonotella beccarii* (Bolívar, 1898). In his work Willemse (1961) gives two drawings of a specimen of *Cladonotella beccarii* (Bolívar, 1898). He was incorrect. It is a new species from West Papua (Rattan Camp): see *Gestroana willemsei* sp. nov. Distribution: Only found on Waigeo.

***Cladonotella gibbosa* (Haan, 1842)** (Plate 68 figs  
1-6)

Holotype ♂ NCB-RMNH, INDONESIA: Japonia, leg. von Siebold.

It is not "Japonia" but Java (Günther 1938a). The type is lost and I did not find him at NCB-RMNH.

Additional material: 1♂ ANSP, INDONESIA: Java, C. Besser, VIII.1940, leg. R. F. Sternitsky; 1♀ SMTD, INDONESIA: Java, Soekaboemi, leg. Overdijkink (*Potua coronata* det. Günther); 1♀ SMTD, INDONESIA: Java, G. Pantjar, 500 m, 11.-14.12.1913, leg. M. A. Lieftinck (*Potua coronata* det. Günther).

Measurements ♀ SMTD (G. Pantjar): Pronotum length 9.39 mm, pronotum lobe width 5.44 mm, pronotum height 3.95 mm, postfemur length 5.6 mm, postfemur width 2.4 mm, vertex width 1.15 mm, eye width 0.45 mm. ♂ ANIC: pronotum length 9.1 mm, pronotum lobe width 5.46 mm, pronotum height 4.16 mm, postfemur length 6.11 mm, postfemur width 2.6 mm, vertex width 1.1 mm, eye width 0.52 mm.

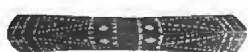
Distribution: Java.

***Cladonotella interrupta* (Bolívar, 1898)** (Plate 68  
figs 7-9)

Holotype ♀, MSNG: INDONESIA: Giava [Java], Tcibodas, X.1874, leg. O. Beccari.

Additional material: 2♂, NCB-RMNH: INDONESIA: Java. 1♀, SMTD: INDONESIA: Java.

Measurements, holotype ♀: Pronotum length 7.67 mm, pronotum lobe width 4.68 mm, pronotum height 2.86 mm, postfemur length 4.81 mm, postfemur width 1.95 mm, vertex width 0.9 mm, eye width 0.44 mm. ♂♂ NCB-RMNH: pronotum length 6.56-7.04 mm, pronotum lobe width 4.5-4.75 mm, pronotum height 2.17-2.25 mm, postfemur length



4.5-4.9 mm, postfemur width 2.05 mm, vertex width 0.9 mm, eye width 0.43 mm.

Distribution: Java.

***Cladonotella riedeli* sp. nov.** (Plate 69 figs 1, 3, 5)

Holotype ♀, ZSM, WEST PAPUA: Jayawijaya-Prov., Samboka, upper Kolff River, ca. 200 m, 10.-14.X.1996, leg. A. Riedel.

Derivatio nominis: Patronymic. The species is named after the collector Dr. Alexander Riedel.

Measurements: Pronotum length 10.67 mm, pronotum lobe width 7.12 mm, pronotum height 6.24 mm, postfemur length 6.64 mm, postfemur width 2.8 mm, vertex width 1.54 mm, eye width 0.61 mm.

Description: Unique species with a high elevation of the pronotum and long spines on the outside of the hind femora. Head lower than the pronotum. Fastigium not reaching the frontal margin of the eyes. Visible part of the vertex short, with shallow fossulae. Anterior border of the fastigium straight. Transverse carinae obsolete. Lateral carinae very short, only like a short horn in line of the middle of the eyes. Vertex broad, 2.5x broader than an eye. Median carina or dorsal end of the frontal costa like a small horn, in lateral view, visible above the eyes. Frontal costa, in lateral view, visible in all parts before the eyes but not arched. Fascial carinae strongly arched before the antennae. Frontal costa in frontal view broad. Furcation of the frontal costa above the superior ocelli, in line of the middle of the eyes. Superior ocelli above the lower margin of the eyes. Eyes subcircular. Their dorsal margin below the fastigium, almost touching the anterior margin of the pronotum. Upper margin of the antennal grooves in line with the lower margin of the eyes. Antennae longer (about 4 mm), their flagellum with 15 articles, no. 13 white and no. 14 light brownish.

Pronotum a little shorter than the body, irregular with a high broad elevation in the anterior half. Elevation of the pronotum in frontal view strongly broadened upwards to the humeral angle. A second elevation, in lateral view, above the middle of the infrascapular area. Between the elevations a deep sulcation. The whole pronotum rugose, covered with smaller and larger spines. Anterior border of the pronotum straight. Median carina visible in all parts. The anterior margin forming a little horn. Pronotal carinae short and straight. Their distance (1.8 mm) longer than the vertex width. Humeral angles angular. Interhumeral carinae absent. Infrascapular area broad and with two light parts, reaching the end of the pronotum. Ventral sinus and internal lateral carinae absent. Lateral lobes slightly curved laterally, the apex acute and the posterior margin truncate. Pronotal process not reaching the knees, seen from above, the apex curved deeply concave. Flight organs absent. Anterior and middle femora slender, the dorsal and ventral margin and the outside with lobes and spines. Middle femora without hairs. Second segment of the tarsus short. Hind femora swollen and stout (2.4x longer than wide). The dorsal and median external area with long spines. The dorsal margin with one lobe. Hind tibia brown with a light antegenicular band. Antegenicular teeth long and acute. Genuiculate teeth large and broader than the antegenicular teeth. Last article of the tarsi nearly as long as the first. First and second pulvilli short and spinose, the third pulvilli as long as the sum of the first and second.

Differential diagnosis: Easy to identify by the special elevation of the pronotum and the long spines on the outside of the hind femora.

Distribution: Only found in one location at the upper Kolff River.

**Key to species of *Cladonotella* Hancock, 1909**

- 1 Elevation of the pronotum in frontal view strongly broadened upwards to the humeral angles ..... *Cladonotella riedeli* sp. nov.
- Elevation of the pronotum in frontal view not or only slightly broadened upwards to the humeral angles ..... 2
- 2 Medial carina, in lateral view, visible before the eyes as a frontal horn ..... 3
- Medial carina, in lateral view, not visible before the eyes ..... *Cladonotella interrupta* (Bolívar, 1898)
- 3 Lobes on the dorsal margin of the hind femur rounded; pronotal process with humps. West Papua ..... *Cladonotella beccarii* (Bolívar, 1898)
- Lobes on the dorsal margin of the hind femur acute; pronotal process with bands. Java ..... *Cladonotella gibbosa* (Haan, 1842)



***Devriesetettix* gen. nov.**

Type species: *Devriesetettix dorreus* (Hancock, 1909) **comb. nov.**

Derivatio nominis: Patronymic. The genus is named after Henrik Devriese, a famous Belgian orthopterologist and scientist in the Tetrigidae.

Description: Eyes not exerted above the fastigium and the pronotum. Vertex 2x broader than an eye, slightly broadened from the supraocular lobes to the frontal margin. Anterior border of the fastigium straight. Lateral carinae, in frontal view, going downwards and reaching the medial carina/frontal costa. Broadened scutellum. Antennae inserted under the lower margin of the eyes. Infrascapular area narrow. Posterior margin of the pronotum broadly rounded. Flight organs absent. Hind femur slender.

Differential diagnosis: The type species *Devriesetettix dorreus* was originally described as *Mazarredia dorrea*. Günther (1938a) added this species to *Tondanotettix* Willemse, 1928. The type species of this genus is *Tondanotettix brevis* (Haan, 1842) from Tondano (Sulawesi) and deposited in Leiden (NCB-RMNH), where I examined the holotype and took pictures (plate 69 figs 2, 4, 6). I agree with Günther (1938a), that this species does not belong to *Mazarredia* with the type species *Mazarredia gemella* (Bolívar, 1887). But it does not belong to *Tondanotettix* Willemse, 1928 either. It is possibly closely related to *Devriesetettix* gen. nov. It is different in that by the lateral carinae (they curved back and does not reach the medial carina in *Tondanotettix* Willemse, 1928), the slender hind femora, the rounded apex of the pronotum and especially the infrascapular area. In *Tondanotettix* Willemse, 1928 the ventral margin of the infrascapular area is conspicuously concave, in *Devriesetettix* gen. nov. it is straight. *Devriesetettix* gen. nov. is related to *Tepperotettix* Rehn, 1952 from Australia, but it differs by the prozonal carinae. In *Tepperotettix* Rehn, 1952 they are curved outwards to the back. The fastigium of *Tepperotettix* Rehn, 1952 is tapering to the frontal margin and the posterior apex of the pronotum is furcated.

Distribution: Only known by the holotype of *Devriesetettix dorreus* from West Papua, Dorey.

***Devriesetettix dorreus* (Hancock, 1909) comb. nov.** (Plate 69 figs 2, 4, 6)

*Mazarredia dorrea* Hancock, 1909 [description].

*Tondanotettix dorreus* (Hancock, 1909) [Günther (1938a): new combination].

Holotype ♀, OUMNH, WEST PAPUA: Dorey, leg. Wallace.

Measurements ♀: pronotum length 6.63 mm, pronotum lobe width 4.0 mm, pronotum height 2.4 mm, postfemur length 5.68 mm, postfemur width 2.0 mm, vertex width 0.94 mm, eye width 0.42 mm (I examined the holotype).

Description, diagnosis and distribution: See above under *Devriesetettix* gen. nov.

***Diotarus Stål, 1877***

Type species: *Diotarus verrucifer* Stål, 1877.

Diagnosis: The genus *Diotarus* Stål, 1877 can be easily identified by the tectiform pronotum and the anterior margin of the pronotum. It is, seen from above, extending above the head. The apex is semicircular. This genus needs to be revised by examining further material from the Philippines and of the type material. Günther (1938a) provides a good introduction to the four known species

Distribution: Found only on the Philippines.

***Diotarus galeatus* Bolívar, 1887**

Lectotype ♀ MNMS, PHILLIPINES: Norzagaray Bulusan, leg. Mazarredo.

Paralectotype ♀ MNMS (?), PHILLIPINES: Montes de Angat, leg. Maeso (after Bolívar, 1887).

I have not examined any of type specimens.

***Diotarus ikonnikovi* Bey-Bienko, 1935** (Plate 70 figs 1, 3, 5)

Holotype ♂ ZIN, PHILLIPINES: Los Banos, leg. N. Ikonnikov.

I have not examined the holotype.

Paratype ♂ NHME, PHILLIPINES: Los Banos, 15.V.1917, leg. N. Ikonnikov.

***Diotarus pupus* Bolívar, 1887**

Syntypes ♀ & ♂ MNMS, PHILLIPINES: Luzon, Camarines sur, leg. Mazarredo.

I have not examined any of type specimens.

***Diotarus verrucifer* Stål, 1877** (Plate 70 figs 2, 4, 6)

Holotype ♂ NHRS, PHILLIPINES: Ins. Philipp., leg. Semper (NRM-ORTH 12932).

***Dolatettix* Hancock, 1907**

Type species: *Dolatettix spinifrons* Hancock, 1907.

Diagnosis: *Dolatettix* Hancock, 1907 is closely related to *Holoarcus* Hancock, 1909. Both genera are the only ones from New Guinea with a pronotum formed as a foliaceous pronotal crest. *Dolatettix*



Hancock, 1907 is distinguished from *Holoarcus* Hancock, 1909, in lateral view, by a very well visible frontal horn (plate 71 fig. 7). The three species of *Dolatettix* Hancock, 1907 are, in comparison to the *Holoarcus*-species with a pronotum length of minimal 15 mm, small or very small. The pronotum length of the *Dolatettix* species is under 12 mm. Distribution: Three species found in the north and west of Papua New Guinea.

***Dolatettix hochkirchi* sp. nov.** (Plate 71 figs 2, 4, 6, 8)

Holotype ♀ BPBM, PAPUA NEW GUINEA: [East Sepik Prov.], Wewak [3°33'S 143°38'E], 2-20 m, 13.X.1957, leg. J. L. Gressitt.

Paratypes 1♀, 1♂ BPBM, PAPUA NEW GUINEA: [East Sepik Prov.], Amok [3°35'S 142°57'E], 165 m, 6.I.1960, leg. T. C. Maa, 1♀ (2/2) deposited in ZFMK.

Derivatio nominis: Patronymic. The species is named after Dr. Axel Hochkirch, a famous German orthopterologist.

Measurements holotype ♀: Pronotum length 7.15 mm, pronotum lobe width 3.9 mm, pronotum height 5.07 mm, postfemur length 6.11 mm, postfemur width 2.6 mm, vertex width 0.96 mm, eye width 0.52 mm. Paratype 1/2 ♀: pronotum length 7.12 mm, pronotum lobe width 3.51 mm, pronotum height 4.25 mm, postfemur length 5.05 mm, postfemur width 2.35 mm, vertex width 1 mm, eye width 0.5 mm. Paratype 2/2 ♂: pronotum length 6.37 mm, pronotum lobe width 3.51 mm, pronotum height 4.25 mm, postfemur length 5.05 mm, postfemur width 2.35 mm, vertex width 0.9 mm, eye width 0.5 mm.

Description: Very small, brachypronotal and wingless species with a foliaceous pronotal crest. Head lower than the pronotum. Fastigium not projecting before the eyes, only the frontal horn of median carina is at eye-level. Anterior border of the fastigium rounded. Vertex convex with one concave part near the eyes and a second near the medial carina, much broader than an eye. Transverse carinae obsolete. Lateral carinae short. Medial carina not elevated. Fossulae shallow. Frontal costa, in lateral view, extended in a frontal horn at the tip of the fastigium, ventrad slightly projected before the eyes. Fascial carinae in lateral view, arched before the antenna. Scutellum in frontal view very broad, much broader than an antennal groove. Furcation of the frontal costa short above the superior ocelli, a little under the middle of the eyes. Superior ocelli in line of the lower third of the eyes. Eyes suboval, touching the anterior

margin of the pronotum. Their dorsal margin much below the fastigium. Upper margin of the antennal grooves slightly in excess of the lower margin of the eyes. Antennae with 14 segments. Pronotum tectiform with a foliaceous pronotal crest, the margin (median carina), in lateral view, arcuate and smooth, in dorsal view very narrow (♀♀ 0.08 + 0.1 mm, ♂ 0.1 mm) with a inconspicuous depression. Anterior border of the pronotum extending over the head. Pronotum rugose, covered with impressed dots and some small carinulae and longer strips at the pronotal process. Prozonal carinae very short and straight, little elevated. Humeral angles and interhumeral carinae absent. Infrascapular area broad with a concave part above the beginning of the middle femora. Internal lateral carinae absent. Lateral lobes of the paranota broadly rounded, not contiguous to the body. Pronotal process short, not reaching the knees of the hind femora, seen from above, broadly truncated with a convex central part. Tegmen and hind wings absent. Anterior and middle femora medium broad. The anterior femora with two ventral lappets. The middle femora with undulating borders, dorsal with one small lappet and some short hairs. The second segment of the tarsus short. Hind femora rather stout (2.3x longer than wide). The dorso- and ventro-external carina without tubercles. The ventro-external carina in dorsal view with an arch. Genicular teeth medium sized. Antegenicular teeth relatively large, larger than Genicular teeth. 2 small sawteeth on the dorsal margin before the antegenicular teeth. The posttibia dark brown with two white bands, the lower one inconspicuous. Pulvilli acute. Oviscapt elongated. Colour brownish with white and black parts on the pronotal crest. A larger black spot above the middle of the infrascapula area. Pronotum, head and legs covered with brownish organic material.

Sexual dimorphism: The male differs only by the smaller size and form of the pronotal process with a short triangularly excised apex from the female.

Differential diagnosis: The new species is clearly recognised as a species of the genus *Dolatettix* Hancock, 1907 by the frontal horn on the fastigium. It differs from *Dolatettix spinifrons* Hancock, 1907 by the arcuate and smooth pronotal crest and shortness.

Distribution: Only found on the northcoast of Papua New Guinea in the area of Wewak.

***Dolatettix lehmanni* sp. nov.** (Plate 71 figs 3, 5)

Holotype ♀ ZMHU, PAPUA NEW GUINEA: [East Sepik Prov.] Regenbergl [4°52'S 144°07'E], 8.-15.V.1913, Kaiserin-Augusta-Flussexpedition Nr. 338, leg. Bürgers



Derivatio nominis: Patronymic. The species is named after Dr. Arne Lehmann, a famous German orthopterologist.

Measurements holotype ♀: Pronotum length 8.19 mm, pronotum lobe width 3.9 mm, pronotum height 5.07 mm, postfemur length 6.11 mm, postfemur width 2.6 mm, vertex width 0.96 mm, eye width 0.52 mm.

Description: Small, wingless species with a foliaceous pronotal crest. Head lower than pronotum. It matches *Dolatettix hochkirchi* sp. nov. in all morphological details but is a little larger. *Dolatettix lehmanni* sp. nov. has no black spot on the pronotal process above the infrascapular area. The width of dorsal margin of the pronotal crest is 0.45 mm.

Differential diagnosis: The new species is clearly recognised as a species of the genus *Dolatettix* Hancock, 1907 by the frontal horn on the fastigium. It differs from *Dolatettix spinifrons* Hancock, 1907 by the arcuate and smooth pronotal crest and shortness. It is very similar to *Dolatettix hochkirchi* sp. nov. but differs by the 4-5x broader margin of the pronotal crest and the absence of a black spot above the infrascapular area. *Dolatettix lehmanni* sp. nov. is a little larger than *Dolatettix hochkirchi* sp. nov.

Distribution: Only found in one location in the south of the Sepik system.

Note: The specimen was incorrectly identified by Günther as *Dolatettix spinifrons* Hancock, 1907.

***Dolatettix spinifrons* Hancock, 1907** (Plate 71 figs 1, 7)

Holotype ♀ ANSP, PAPUA NEW GUINEA: [Central Prov.], Moroka [9° 25'S 147° 41'E], 2000 ft, 1891, leg. Anthony. Additional material: 1♀ UMB, PAPUA NEW GUINEA: [Northern Prov.], Popondetta, Lejo Station, 12 km W Popondetta, 12.V.1973, leg. Hohmann.

Measurements ♀ UMB: Pronotum length 11.44 mm, pronotum lobe width 4.08 mm, pronotum height 6.3 mm, postfemur length 7.2 mm, postfemur width 3.12 mm, vertex width 1.06 mm, eye width 0.6 mm. The dorsal margin of the pronotum is nearly straight and not as undulated as the holotype. In comparison with the Holotype the fascial carinae are more projected before the antenna. There is more research required to determine whether this is a new species or not.

Note: I did not have access to the following specimen from Günther (1938b): 1♀ BMNH: Kokoda, 400 m, IX.1933, leg. L.E. Cheesman.

***Epitettix* Hancock, 1907**

Type species: *Epitettix punctatus* Hancock, 1907. Distribution: Madagascar (locality needs confirmation), India, Vietnam, Indonesia, New Guinea.

***Epitettix dammermanni* Günther, 1939**

Holotype ♀ SMTD, INDONESIA: [Java], Idjen, Blawan, 950 m, 7.VI.1924, leg. Dammerman.

Distribution: Java.

***Epitettix elytratus* Günther, 1939**

Holotype ♀ NZSI, INDIA: Darjeeling Distr., Kalimpong, 200-1500 m, 1.IV-31.V.1915, leg. Gravely.

Distribution: Only found at the type locality in India.

***Epitettix emarginatus* (Haan, 1842)** (Plate 72, figs 1-4, 7-8)

Holotype ♀ NCB-RMNH, NEW GUINEA: N. Guinea. I found the Holotype at NCB-RMNH and labelled it. The specimen has a typical round label given by the author Haan.

Additional material: 1♂ BPBM, WEST PAPUA: Vogelkop, Bomberai, sweeping, 700-900 m, 6.+7.VI.1959, leg. T. C. Maa; 1♂ BPBM, WEST PAPUA: Vogelkop, S.coast of Bomberai, Fak Fak [2° 55'S 132° 18'E], 10-100 m, 11.VI.1959, leg. T. C. Maa.

Note: It is somewhat uncertain whether these two males are in fact *Epitettix emarginatus* since they are a smaller. Further research is required.

Distribution: Found in the west of West Papua.

***Epitettix fatigans* Günther, 1938**

Holotype ♂ ZMHU, PAPUA NEW GUINEA: [East Sepik Prov.], Lordberg [4° 50'S 142° 29'E], 1000m, 29.-30. XI.1912, leg. S. G. Bürgers (DORSA: BXepifatHTF).

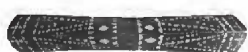
Paratype ♂ ZMHU, PAPUA NEW GUINEA: [East Sepik Prov.], Regenbergl [4° 52' 144° 07'E], 550m, 8.-15.V.1913, leg. S. G. Bürgers (DORSA: BXepifatPM1).

Note: The labels of holotype and paratype were switched around when the photographs were taken. The specimens are described correctly in the publication.

Distribution: Only found at the type localities in the upper Sepik River system.

***Epitettix humilicolus* Günther, 1938** (Plate 72 figs 5-6, 9)

Holotype ♂ ZMHU, PAPUA NEW GUINEA: [East Sepik Prov.], Standlager bei Malu [4° 13'S 142° 49'E], III.-



IV.1912, leg. S. G. Bürgers (Dorsa: BXepihumHTM).

Additional material: 1♀ ZMHU, PAPUA NEW GUINEA: [East Sepik Prov.], Hauptlager bei Malu (Nr. 107) [4° 13'S 142° 49'E], 3.VIII.1912, leg. S. G. Bürgers.

Distribution: Only found at the type locality at the upper Sepik River.

***Epitettix lativertex* Günther, 1938**

Holotype ♀ ZMHU, PAPUA NEW GUINEA: [East Sepik Prov.], Lordberg [4° 50'S 142° 29'E], 2.-4.XII.1912, leg. S. G. Bürgers (DORSA: BXepifatHTF).

Distribution: Only found at the type locality at the upper Sepik River.

***Epitettix punctatus* Hancock, 1907**

Type ♂ SMSM, MALAYSIA: Borneo, Kuching.

Distribution: Only found on Borneo.

***Epitettix* (?) *spheniscus* Günther, 1974**

Syntypes ♂♂ MNHN, MADAGASCAR: Namoraka.

Distribution: Only found on Madagascar.

***Epitettix striganovae* Storozhenko, 2012**

Holotype ♀ ZIN, VIETNAM: Lam Dong Prov., environs of Long Lanh, Bui Doup, Nui Ba Nature Reserve, 12° 10'N 108° 40'E, 1400-1900 m, 1.-22.IV.2008, leg. D. Fedorenko.

Paratype ♂ ZIN, VIETNAM: Lam Dong Prov., environs of Long Lanh, Bui Doup, Nui Ba Nature Reserve, 12° 10'N 108° 40'E, 1400-1900 m, 1.-22.IV.2008, leg. D. Fedorenko.

Distribution: Only found at the type locality in Vietnam.

***Epitettix tamilus* Günther, 1939**

Holotype ♀, NZSI: INDIA: Kerala, Cochin [Kochi], forest tramway.

Distribution: Only found near Kerala in India.

***Epitettix tumidus* Günther, 1938**

Holotype ♀ ZMHU, PAPUA NEW GUINEA: [East Sepik Prov.], Etappenberg [4° 38'S 142° 28'E], 16.-18.XI.1912, leg. S. G. Bürgers (DORSA: BXepilatHTF).

Distribution: Only found at the type locality at the upper Sepik River.

***Eurymorphopus* Hancock, 1907**

Type species: *Eurymorphopus cunctatus* (Bolívar, 1887).

Diagnosis: *Eurymorphopus* Hancock, 1907 is closely related to *Planotettix* gen. nov. The two *Eurymorphopus*-species are brachypronotal, the *Planotettix*-species are micropronotal. In *Planotettix* gen. nov., the internal lateral carina is lost. In *Eurymorphopus* Hancock, 1907 the internal lateral carina is clearly visible.

Distribution: Two species only found on New Caledonia.

***Eurymorphopus bolivariensis* sp. nov.** (Plate 73 figs 1, 3, 5)

Holotype ♀ MHNG, NEW CALEDONIA.

Derivatio nominis: Patronymic. The species is named after Ignacio Bolívar.

Measurements: Pronotum length 6.8 mm, pronotum lobe width 4.35 mm, pronotum height 1.62 mm, postfemur length 4.45 mm, postfemur width 1.53 mm, vertex width 0.6 mm, eye width 0.4 mm.

Description: Head not exerted above the pronotum. Fastigium projecting before the eyes. Anterior border of the fastigium straight. Vertex broader than an eye. Transverse carinae obsolete. Lateral carinae short, curved inwards. Medial carina not elevated. Fossulae obsolete. Frontal costa, in lateral view, arched before the upper half of the eye. Fascial carinae, in lateral view, not arched before the antenna. Scutellum, in frontal view broad, a little broader than an antennal groove. Furcation of the frontal costa above the superior ocelli, a little above the lower margin of the eyes. Superior ocelli in line with the lower margin of the eyes. Eyes subcircular, not touching the anterior margin of the pronotum. Their dorsal margin not extending above the fastigium. Upper margin of the antennal grooves below the lower margin of the eyes. Pronotum flattened, coarse with some short carinulae and tubercles. Median carina extending to the anterior border. Prozonal carinae parallel or curved a little outwards towards the anterior border of the pronotum. Humeral angles and interhumeral carinae absent. Internal lateral carinae nearly straight. Lateral lobes of the paranota broadly rounded, strongly curved laterally. Pronotal process short, not reaching the end of the knees of the hind femora, seen from above, broadly truncated, posteriorly with a spine in the extension of the median carina. Tegmen and hind wings absent. The dorsal margin of the anterior and middle femora





undulating. The ventral margin with three lappets and without hairs. The second segment of the tarsus short. Hind femora slender (3x longer than wide). The ventro-external carina with one small lappets curved laterally. Genicular- and antegenicular teeth not visible. Posttibia brown with two white bands. Pulvilli obtuse. Colour from above in the anterior half light brown, in the posterior half brown.

Differential diagnosis: *Eurymorphopus bolivariensis* differs from *Eurymorphopus cunctatus* by the projection of the fastigium.

Distribution: New Caledonia.

***Eurymorphopus cunctatus* (Bolívar, 1887)** (Plate 73 figs 2, 4, 6)

Syntype ♂ IRSNB, NEW CALEDONIA: leg. Hanckar.

I only examined the syntype from IRSNB but did not have access to the syntype from NMW.

Measurements: Pronotum length 5.04 mm, pronotum lobe width 3.25 mm, pronotum height 1.4 mm, postfemur length 4.1 mm, postfemur width 1.29 mm, vertex width 0.54 mm, eye width 0.36 mm.

Differential diagnosis: Günther (1972) reported about two specimens in bad condition from MNHM. But Günther did not examine a syntype of *Eurymorphopus cunctatus* and only referred to Kaltenbach who compared the specimen from Vienna with the description of Günther. The distinguishing mark of the two specimens is the furcation of the frontal costa: between the superior ocelli but below the ventral margin of the eyes. This is a unique feature and if he is correct, postulating a new species should be considered. Further research is necessary.

Distribution: New Caledonia.

***Gavialidium Saussure, 1862***

Type species: *Gavialidium crocodilum* (Saussure, 1862)

Note: Storozhenko (2011) transferred the genus with the following two species to the Cladonotinae.

Distribution: South-East-Asia from India to New Guinea.

***Gavialidium crocodilum* Saussure, 1862**

Syntypes 3♀, 6♂ MHNG, SRI LANKA: Kaduganawa.

Distribution: Sri Lanka.

***Gavialidium philippinum* Bolívar, 1887**

Lectotype ♀ MNMS, PHILIPPINES.

Distribution: Philippines.

***Gestroana* Berg, 1898**

Type species: *Gestroana discoidea* Bolívar, 1898.

The genus was established by Bolívar 1898 under the name *Gestro*a with the type species *Gestro*a *discoidea*. Bolívar missed that Pini (1876) had established the name for the still valid genus of Mollusca. Berg (1898) established the homonymy and renamed the genus to *Gestroana* Berg, 1900. Description: Small micropronotal species without flying organs. The antennae inserted deeply below the lower margin of the eyes. Along the line of the median carina sometimes bizarre growth of the pronotal crest. Antegenicular teeth in most species relatively large.

Diagnosis: Closely related to *Cladonotella* Hancock, 1909. But the species of *Cladonotella* Hancock, 1909 are larger and just have some growth at the entire of the anterior part of the pronotum and not only just at the median carina.

Distribution: Endemic of New Guinea. Most species found in the mountains.

***Gestroana bicristulata* (Günther, 1938) comb. nov.** (Plate 74 fig. 1)

*Cladonotella bicristulata* Günther, 1938 [description]

Holotype ♀ ZMHU, PAPUA NEW GUINEA: [East Sepik Prov.], Quellager (Nr. 128) [4°32'S 142°41'E], 13.-16. VIII.1912, leg. Bürgers (DORSA: BXclabicHTF).

Differential diagnosis: In all characteristics the species belongs to *Gestroana* Berg, 1900 and not to *Cladonotella* Hancock, 1909. The pronotal crest of the small species is narrow and bimodal with a distinct emargination above the mid femora.

Distribution: Only found in one location at the upper Sepik River.

***Gestroana baiyerriveriensis* sp. nov.** (Plate 74 fig. 2, plate 76 fig. 1, plate 78 fig. 1)

Holotype ♀, BPBM: PAPUA NEW GUINEA: [Western Highlands Prov.], Baiyer River [5°32'S 144°09'E], 1150 m, 18.X.1958, leg. J. L. Gressitt.

Derivatio nominis: The species is named after the type locality.

Measurements: Pronotum length 6.89 mm, pronotum lobe width 3.68 mm, pronotum height 2.4 mm, postfemora lost, vertex width 0.84 mm, eye width 0.36 mm.

Description: Rather small micropronotal species.



Fastigium not reaching the frontal margin of the eyes, the anterior border nearly straight. Anterior half of the vertex a little lower than the posterior half. Fossulae deep. Vertex 2.3x broader than an eye. Transverse and secondary carinae absent. Lateral carinae short and curved inwards. Medial carina starts near the anterior border of the fastigium, a little lamellate. Frontal costa, in lateral view, not arched and not visible in front of the eyes. Fascial carinae, in lateral view, arched before the antennae. Scutellum in frontal view broad. Furcation of the frontal costa slightly above the superior ocelli. Superior ocelli in line of the lower margin of the eyes. Eyes subcircular, their dorsal margin not extending above the fastigium. Eyes not touching the anterior margin of the pronotum. Antennae inserted about 1x deeper than the diameter of an antennal groove below the lower margin of the eyes. Pronotum, in lateral view, with one higher elevation in the anterior half and one lower elevation in the posterior part. Laterally two elevations as smaller humps above the middle femora. The first elevation starts at the end of the prozona. The median carina slightly increasing posteriorly. Some smaller humps on the pronotum. Anterior border of the pronotum straight. Median carina in the prozona existing only as a short dot at the anterior margin. Prozonal carinae straight and, in lateral view, arched. Humeral angles, interhumeral carinae and internal lateral carinae absent. Infrascapular area narrow and reaching the end of the pronotum, the dorsal margin with two nearly straight sections in the middle and posterior third. Lateral lobes strongly curved laterally. In dorsal view rounded and curved posteriorly. Flight organs absent. The dorsal margin of the 9 tergite without any tubercles. Ventral margin of the anterior and middle femora with lobes or undulated. Middle femora ventral with some short hairs. Second segment of tarsus short. Differential diagnosis: Specific for this species is the infrascapular area with two nearly straight sections in the middle and posterior third of the dorsal margin.

Distribution: Only found in the location of Baiyer River.

***Gestroana cyclopensis* sp. nov.** (Plate 74 fig. 3, plate 76 fig. 2, plate 78 fig. 2)

Holotype ♀ BPBM, WEST PAPUA: Cyclops Mountains, Ifar [2°34'S 140°31'E], 300-500 m, 23.-25.VI.1962, leg. J. Sedlacek.

Derivatio nominis: The species is named after the type locality.

Measurements: Pronotum length 4.16 mm, pronotum lobe width 3.92 mm, pronotum height 2.96 mm, postfemur length 4.16 mm, postfemur width 1.44 mm, vertex width 1.08 mm, eye width 0.38 mm.

Description: Rather small micropronotal and wingless species with a wide vertex and a serrulate pronotal crest. Fastigium reaching the frontal margin of the eyes. Anterior half of the Vertex a little lower than the posterior half. Fossulae deep. Vertex 2.8x broader than an eye. Transverse and secondary carinae absent. Lateral carinae short and straight. The upper margin curved outwards, in lateral view, visible above the eyes. Medial carina starts in line with the supraocular lobes, strongly elevated and lamellate. In lateral view visible above the eyes. The whole frontal costa in lateral view visible before the eyes. Fascial carinae in lateral view slightly arched before the antennae. Scutellum in frontal view very broad, broader than an eye. Furcation of the frontal costa slightly above the superior ocelli. Superior ocelli in line of the lower margin of the eyes. Eyes subcircular, their dorsal margin not extending above the fastigium. Eyes not touching the anterior margin of the pronotum. Antennae inserted about 1x deeper than the diameter of an antennal groove below the lower margin of the eyes. Pronotum, in lateral view, with one high pronotal crest in the anterior half. The pronotal crest starts vertically increasing at the posterior margin of the prozona. The median carina slightly descending posteriorly, with one spine near the apex. Some spines and lappets on the pronotum. Anterior border of the pronotum slightly concave between the prozonal carinae. Prozonal carinae longer, straight and spiny. Humeral angles, interhumeral carinae and internal lateral carinae absent. Infrascapular area narrow, reaching the end of the pronotum. Lateral lobes strongly curved laterally, rounded and saw-toothed. Pronotal process surpassing the middle of the hind femora. The apex seen from above broadly concave. Flight organs absent. The dorsal margin of the 7., 8. and 9. tergite with 2 longer spines, the 10. tergite with two longer spines side by side. Dorsal and ventral margin of the anterior and middle femora with 2-3 acute lobes. Middle femora ventral with short hairs. Second segment of tarsus short. Hind femora slightly slender (2.9x longer than wide). The dorsal and median external area with high and broad elevations. Hind tibia brownish with a light antegenicular band. Genuicular- and antegenicular teeth large and serrulate, the antegenicular teeth larger than the Genuicular teeth. Last article of the tarsi a little shorter than the first. First and second



pulvilli short and acute, the first tiny. The third acute pulvilli longer than the sum of the first and second. Differential diagnosis: Specific for this species are the vertical increasing serrulate pronotal crest, the relatively broad vertex, the large elevations on the hind femora and the spines on the last tergites. Distribution: Only found in the Cyclops Mountains.

***Gestroana discoidea* Berg, 1898** (Plate 75 figs 4-5, plate 76 figs 3-4, plate 78 figs 3-4)

Holotype ♂ MSNG, PAPUA NEW GUINEA: Nuova Guinea, [Western Prov.], Fly River 1876-77, leg. L. M. D'Albertis.

Note: The specimen is labelled with an old "Typus"-label. The label "Sintipo" is from Mercedes París (1994). But I think this specimen is the Holotype.

Paratypes 1♀ (1/2) MNCN, PAPUA NEW GUINEA: Nuova Guinea, [Western Prov.], Fly River 1876-77, leg. L. M. D'Albertis (Cat. Tipos no. 159); 1♂ (2/2) MSNG, PAPUA NEW GUINEA: Nuova Guinea, [Western Prov.], Fly River 1876-77, leg. L. M. D'Albertis.

Note: The specimens are labelled as "Sintipo" and "Syntypus". The label "Sintipo" is from Mercedes París (1994). But I think both specimens are paratypes.

Additional material: 2♀, 4♂ BPBM, PAPUA NEW GUINEA: [Western Prov.], Fly River, Olsobip [5°23'S 141°32'E], 400-600 m, VIII.1969, leg. J. & M. Sedlacek.

Measurements holotype ♂: Pronotum length 4.8 mm, pronotum lobe width 3.9 mm, pronotum height 3.9 mm, postfemur length 4.75 mm, postfemur width 1.9 mm, vertex width 0.94 mm, eye width 0.42 mm. Paratype 1/2 ♀: pronotum length 6.37 mm, pronotum lobe width 4.42 mm, pronotum height 4.55 mm, postfemur length 5.59 mm, postfemur width 2.21 mm, vertex width 1.1 mm, eye width 0.5 mm. Paratype 2/2 ♂: pronotum length 4.75 mm, pronotum lobe width 3.9 mm, pronotum height 3.5 mm, postfemur length 4.85 mm, postfemur width 1.85 mm, vertex width 1.02 mm, eye width 0.4 mm.

Differential diagnosis: Easy to identify by the high, rounded and serrated pronotal crest.

Distribution: Found in the south of New Guinea in the Fly River area.

***Gestroana flasbarthi* sp. nov.** (Plate 74 fig. 6, plate 76 fig. 5, plate 78 fig. 5)

Holotype ♂ BPBM, PAPUA NEW GUINEA: [Southern Highlands Prov.], Dimifa, SE of Mt. Giluwe [6°05'S 143°41'E], 2200 m, 12.X.1958, leg. J. L. Gressitt.

Paratype 1♂ (1/1) BPBM, PAPUA NEW GUINEA: [Western Highlands Prov.], 11 km S of Mt. Hagen (town), 2200-2300 m, 21.V.1963, leg. J. Sedlacek, deposited in ZFMK.

Derivatio nominis: Patronymic. The species is named after Jochen Flasbarth, the former president of the Naturschutzbund Deutschland and the former president of the German Umweltbundesamt. Measurements holotype ♂: Pronotum length 3.84 mm, pronotum lobe width 3.36 mm, pronotum height 2.16 mm, postfemur length 4.4 mm, postfemur width 1.68 mm, vertex width 0.84 mm, eye width 0.42 mm. Paratype ♂ (1/1): pronotum length 4 mm, pronotum lobe width 3.28 mm, pronotum height 2.48 mm, postfemur length 4.64 mm, postfemur width 1.44 mm, vertex width 0.88 mm, eye width 0.46 mm.

Description holotype ♂: Rather small micropronotal and wingless species. Fastigium nearly reaching the frontal margin of the eyes. Anterior half of the vertex a little lower than the posterior half. Fossulae moderately deep. Vertex 2x broader than an eye. Lateral and secondary carinae nearly rounded, reaching the median carina. Lateral carinae curved strongly inwards. Secondary carinae curved transverse back to the medial carina. Medial carina starts near the anterior border of the fastigium, a little lamellate. In lateral view not visible above the eyes. Frontal costa not elevated. Fascial carinae in lateral view arched before the antennae. Scutellum in frontal view broad. Furcation of the frontal costa slightly above the superior ocelli. Superior ocelli in line of the lower margin of the eyes. Eyes subcircular, their dorsal margin not extending above the fastigium. Eyes not touching the anterior margin of the pronotum. Antennae inserted about 1x deeper than the diameter of an antennal groove below the lower margin of the eyes. Pronotum, in lateral view, with one higher elevation in the anterior half and one lower elevation in the posterior part. Laterally two elevations as smaller humps above the middle femora. The first elevation starts at the anterior margin of the prozona. The median carina not increasing posteriorly. Some smaller humps on the pronotum. Anterior border of the pronotum straight. Prozonal carinae longer and a little lamellate and arched. Humeral angles, interhumeral carinae and internal lateral carinae absent. Infrascapular area a little broader, in dorsal view slightly undulating, reaching the end of the pronotum. Lateral lobes strongly curved laterally, rounded. Pronotal process reaching the middle of the hind femora, the apex seen from above truncated, slightly concave. Flight organs absent. The dorsal margin of the 9. tergite with 4 and more separated tubercles, the 10. tergite with two longer spines. Ventral margin of the anterior and middle femora with 2-3 smaller



lobes, the dorsal margin undulated. Middle femora ventral with short hairs. Second segment of tarsus short. Hind femora stout (2.5-2.6x longer than wide). The dorsal and median external area with some rounded elevations, the ventro-external carina with one lobe curved outwards. The ventral margin of the hind femora with small lobes. Hind tibia brownish. Genicular teeth and antegenicular teeth medium sized, rounded. Last article of the tarsi shorter than the first. First and second pulvilli short and obtuse, the third obtuse pulvilli as long as the sum of the first and second. Colour brownish with some lighter parts.

Differential diagnosis: Specific for this species is the anterior elevation of the pronotum. The elevation starts at the anterior margin of the prozona.

Distribution: Only found in higher mountain regions between Mt. Hagen and Mt. Giluwe.

***Gestroana gressitti* sp. nov.** (Plate 74 fig. 7, plate 76 fig. 6, plate 78 fig. 6)

Holotype ♀ BPBM, PAPUA NEW GUINEA: [Chimbu Prov.], Karimui [6°30'S 144°51'E], Malaise Trap, 2.-3. VI.1961, leg. J. L. Gressitt.

Derivatio nominis: The species is named after the collector J. Linsley Gressitt.

Measurements holotype ♀: Pronotum length 4.55 mm, pronotum lobe width 3.77 mm, pronotum height 2 mm, postfemur length 5.12 mm, postfemur width 1.74 mm, vertex width 0.7 mm, eye width 0.5 mm.

Description holotype ♀: Rather small micropronotal and wingless species. In most characteristics like *Gestroana flasbarthi*. But the scutellum of *Gestroana gressitti* is slightly narrower. The vertex is only 1.4x broader than an eye. The first elevation starts at the posterior margin of the prozona. The apex of the pronotal process seen from above is rounded convex. The dorsal margin of the 9. tergite with 2 very small tubercles and the 10. tergite without longer spines only with two tubercles like a tiny dot. Hind femora more slender (2.9x longer than wide). The outside of the hind femora only with one rounded hump in the dorsal external area. The ventro-external carina without a lobe. Genicular teeth and antegenicular teeth a little smaller and serrated.

Differential diagnosis: Closely related to *Gestroana flasbarthi*. However, due to the above described differences, I do not identify this specimen as the unknown female of *Gestroana flasbarthi*. Further examination of material,

especially of males from the region of Karimui and females from the Mt. Giluwe and Mt. Hagen region, is necessary to make a decision.

Distribution: Only found at Karimui.

***Gestroana karimuiensis* sp. nov.** (Plate 74 figs 9-10, plate 76 figs 8-9, plate 78 figs 8-9)

Holotype ♀ BPBM, PAPUA NEW GUINEA: [Chimbu Prov.], Karimui [6°30'S 144°51'E], 1080 m, 11.-12. VII.1963, leg. J. Sedlacek.

Paratypes ♀ (1/4) BPBM, PAPUA NEW GUINEA: [Chimbu Prov.], Karimui [6°30'S 144°51'E], South of Goroka, 1000 m, 7.VI.1961, deposited in ZFMK; ♂ (2/4) BPBM, PAPUA NEW GUINEA: [Chimbu Prov.], Karimui [6°30'S 144°51'E], 1080 m, 8-10.VII.1963, leg. J. Sedlacek, deposited in NCB-RMNH. 2♂ larvae (3/4 + 4/4) BPBM, PAPUA NEW GUINEA: [Chimbu Prov.], Karimui [6°30'S 144°51'E], South of Goroka, 1000 m, 7.VI.1961, leg. J. L. & M. Gressitt.

Derivatio nominis: The species is named after the type locality.

Measurements, holotype ♀: pronotum length 4.81 mm, pronotum lobe width 4.29 mm, pronotum height 3.95 mm, postfemur length 5.2 mm, postfemur width 2 mm, vertex width 1.06 mm, eye width 0.46 mm. Paratype ♀ (1/2): pronotum length 4.56 mm, pronotum lobe width 3.92 mm, pronotum height 4.29 mm, postfemur length 5.85 mm, postfemur width 2.08 mm, vertex width 1.14 mm, eye width 0.5 mm. Paratype ♂ (2/2): pronotum length 4.56 mm, pronotum lobe width 3.92 mm, pronotum height 3.36 mm, postfemur length 4.8 mm, postfemur width 1.84 mm, vertex width 0.96 mm, eye width 0.44 mm.

Description, holotype ♀: Small micropronotal and wingless species with serrulate and acute pronotal crest. Fastigium not reaching the frontal margin of the eyes. Anterior half of the Vertex a little lower than the posterior half. Fossulae deep. Vertex 2.3x broader than an eye. Transverse and secondary carinae absent. Lateral carinae short and curved inwards. In lateral view the lateral carinae minimally visible above the eyes. Medial carina starts near the anterior border of the fastigium, not lamellate. In lateral view not visible above the eyes. The frontal costa, in lateral view, not arched and visible before the eyes. Fascial carinae in lateral view arched before the antennae. Scutellum in frontal view broad. Furcation of the frontal costa slightly above the superior ocelli. Superior ocelli in line of the lower margin of the eyes. Eyes subcircular, their dorsal margin not extending above the fastigium. Eyes touching the anterior margin of the pronotum.



Antennae inserted a little more than 1x deeper than the diameter of an antennal groove below the lower margin of the eyes. Pronotum in lateral view with one high and acute pronotal crest in the anterior half. The margin of the pronotum serrulate, in the posterior half with longer spines. The pronotum starts increasing at the posterior margin of the prozona. The dorsal margin of the pronotal crest with a distinct depression above the beginning of the hind femora. Some spines on the pronotum. Anterior border of the pronotum straight. Prozonal carinae short, straight and spiny. Humeral angles, interhumeral carinae and internal lateral carinae absent. Infrascapular area narrow, the dorsal margin with a distinct arch before the posterior third. Lateral lobes strongly curved laterally, rounded and saw-toothed. Pronotal process surpassing the middle of the hind femora. The apex seen from above broadly concave. Flight organs absent. The dorsal margin of the 9. tergite with 2 longer spines, the 10. tergite with two spines side-by-side. Dorsal and ventral margin of the anterior and middle femora undulated. Middle femora ventral with short hairs. Second segment of tarsus short. Hind femora slightly slender (2.6x longer than wide). The dorsal and median external area with some small spiny elevations. The ventro-external carina with a small spiny lobe. Hind tibia brownish with a light antegenicular band. Genicular teeth smaller and acute. Antegenicular teeth large and serrulate. Last article of the tarsi as long as the first. First and second pulvilli short and obtuse. The third acute pulvilli longer than the sum of the first and second. The male a little smaller but with the same characteristics as the female.

Differential diagnosis: Specific for this species is the increasing serrulate and spiny pronotal crest with a distinct depression posteriorly.

Distribution: Only found at Karimui.

***Gestroana kleukersi* sp. nov.** (Plate 75 fig. 1, plate 77 fig. 1, plate 79 figs 1, 9)

Holotype ♀ NCB-RMNH, WEST PAPUA: Araucaria Camp [3°30'S 139°11'E], 800 m, 2.III.1939, Neth. Ind.-American New Guinea Expedition, leg. L. J. Toxopeus.

Derivatio nominis: Patronymic. The species is named after Roy Kleukers, a famous Dutch orthopterologist and my good friend.

Measurements: Pronotum length 4.42 mm, pronotum lobe width 3.9 mm, pronotum height 2.47 mm, postfemur length 5.2 mm, postfemur width 1.43 mm, vertex width 0.8 mm, eye width 0.42 mm.

Description: Rather small micropronotal species with deeply inserted antennae and slender hind femora. Fastigium not reaching the frontal margin of the eyes, the anterior border nearly straight. Anterior half of the vertex a little lower than the posterior half. Fossulae moderately deep. Vertex nearly 2x broader than an eye. Lateral and secondary carinae nearly u-shaped. Lateral carinae short and curved inwards, in lateral view visible above the eyes. Medial carina at the anterior margin nearly absent. Frontal costa in lateral view a little arched before the eyes. Fascial carinae in lateral view arched before the antennae. Scutellum in frontal view broad. Furcation of the frontal costa slightly above the superior ocelli. Superior ocelli 1x deeper than the diameter of an antennal groove below the lower margin of the eyes. Eyes subcircular, their dorsal margin not extending above the fastigium. Eyes not touching the anterior margin of the pronotum. Antennae inserted about 2x deeper than the diameter of an antennal groove below the lower margin of the eyes. Pronotum in lateral view with three elevations. One, in the anterior half, the second above the middle of the infrascapular area, and the third at the posterior end of the pronotum. Between the first and second elevation a broadly u-shaped depression. The first elevation starts behind the posterior end of the prozona. No humps on the pronotum. Anterior border of the pronotum straight. Median carina in the prozona reaching the anterior margin. Prozonal carinae straight. Humeral angles, interhumeral carinae and internal lateral carinae absent. Infrascapular area narrow, reaching the end of the pronotum. Lateral lobes strongly curved laterally and quadratic. The apex of the pronotum seen from above concave. Flight organs absent. The dorsal margin of the 9. tergite with small tubercles. Ventral and dorsal margins of the anterior and middle femora with 2-3 lobes. Middle femora ventral without short hairs. Second segment of tarsus short. Hind femora slender (3.6x longer than wide). The dorsal and median external without rounded elevations. Ventro-external carina with two lobes curved outwards. The ventral margin of the hind femora with small lobes. Hind tibia brownish with lighter areas. Genicular- and antegenicular teeth small and acute. Last article of the tarsi nearly as long as the first. First and second pulvilli short and obtuse, the third obtuse pulvilli as long as the sum of the first and second.

Differential diagnosis: Specific for this species are the deeply inserted antennae and the slender hind femora.

Distribution: Only found at the type locality in the



northwest of West Papua.

***Gestroana moanemaniensis* sp. nov.** (Plate 75 fig.

2, plate 77 fig. 2, plate 79 fig. 2)

Holotype ♂ BPBM, WEST PAPUA: Wisselmeren, Moanemani, Kamo V. [3°55'S 136°15'E], 1500 m, 15.VIII.1962, leg. J. Sedlacek.

Derivatio nominis: The species is named after the type locality.

Measurements: Pronotum length 3.9 mm, pronotum lobe width 3.25 mm, pronotum height 1.9 mm, postfemur length 4.16 mm, postfemur width 1.69 mm, vertex width 0.78 mm, eye width 0.34 mm.

Description: Rather small micropronotal and wingless species. Fastigium not reaching the frontal margin of the eyes. Anterior half of the Vertex not lower than the posterior half. Fossulae deep. Vertex nearly 3x broader than an eye. Lateral and secondary carinae nearly rounded, reaching the median carina. Lateral carinae curved strongly inwards. Secondary carinae curved transverse back to the medial carina. Medial carina starts near the anterior border of the fastigium, a little lamellate. In lateral view not visible above the eyes. Frontal costa not elevated. Fascial carinae in lateral view arched before the antennae. Scutellum in frontal view moderately broad. Furcation of the frontal costa slightly above the superior ocelli. Superior ocelli in line of the lower margin of the eyes. Eyes subcircular, their dorsal margin not extending above the fastigium. Eyes touching the anterior margin of the pronotum. Antennae inserted about 1x deeper than the diameter of an antennal groove below the lower margin of the eyes. Pronotum in lateral view with one arched elevation in the anterior half and two laterally smaller humps above the middle femora. The first elevation starts at the posterior end of the prozona. The median carina not increasing posteriorly. Some smaller humps on the pronotum. Anterior border of the pronotum straight. Median carina in the prozona existing only as a short dot at the anterior margin. Prozonal carinae longer and a little lamellate. Humeral angles, interhumeral carinae and internal lateral carinae absent. Infrascapular area smaller, reaching the end of the pronotum. Lateral lobes strongly curved laterally, slightly rounded, posterior margin truncate. Pronotal process extending over the middle of the hind femora, the apex, seen from above, truncated without any sulcation. Flight organs absent. The dorsal margin of the 9. tergite with 3 tubercles, the middle broader and

obtuse. Ventral and dorsal margin of the anterior and middle femora with 2-3 lobes. Middle femora ventral with short hairs. Second segment of tarsus short. Hind femora stout (2.5x longer than wide). The dorsal and median external area with some rounded elevations. The ventral margin of the hind femora with small lobes. Hind tibia brown with a light antegenicular band. Genuic teeth medium sized, rounded. Antegenicular teeth broad and rounded. Last article of the tarsi a little shorter than the first. First and second pulvilli short and obtuse, the third obtuse pulvilli as long as the sum of the first and second. Colour brownish. The paraproctum of the genital with two slightly curved titillators. The apex of the titillators conical and obtuse.

Differential diagnosis: Characteristic combination of morphological elements: lower arched anterior elevation of the pronotum, three separate elevations of the pronotum, median carina flattened in the posterior half, relatively large and broad antegenicular teeth and three specific tubercles on the posterior margin of the 9 tergite.

Distribution: Only found in one place near Moanemani.

***Gestroana morobensis* sp. nov.** (Plate 75 fig. 3, plate 77 fig. 3, plate 79 fig. 3)

Holotype ♀ BPBM, PAPUA NEW GUINEA: [Morobe Prov.], Mt. Kaindi [7°21'S 146°41'E], 2350 m, 11.IX.1968, leg. J. Sedlacek.

Paratypes 1♀ (1/10) BPBM, PAPUA NEW GUINEA: [Morobe Prov.], Mt. Kaindi [7°21'S 146°41'E], 2350 m, 11.IX.1968, deposited in NCB-RMNH; 1♀ (2/10) BPBM, PAPUA NEW GUINEA: [Morobe Prov.], Wau, Big Wau Creek, 1200-1500 m, IX.1965, leg. J. & M. Sedlacek, deposited in ZFMK; 1♀ (3/10) BPBM, PAPUA NEW GUINEA: [Morobe Prov.], Wau, Edie Creek [7°21'S 146°40'E], 2100-2300 m, 3.X.1964, leg. J. Sedlacek, deposited in BMNH; 1♀ (4/10) BPBM, PAPUA NEW GUINEA: [Morobe Prov.], Wau Subdist., 30-35 km ESE Kaisenik, 1600-2290 m, 5.X.1974, leg. J. L. Gressitt, deposited in IRSNB; 1♀ (5/10) BPBM, PAPUA NEW GUINEA: [Morobe Prov.], Bulldog Road, 40 km S. Wau, 2700-2800 m, 22.-31.V.1969, deposited in MSNG; 1♀ (6/10) BPBM, PAPUA NEW GUINEA: [Morobe Prov.], Mt. Missim, E. Wau [7°13'S 146°49'E], 2800 m, 22.-30. IV.1968, leg. J. L. Gressitt, Rice, R. C. A. & J. Sedlacek, deposited in ZMHU; 2♀ (7/10+8/10) BPBM, PAPUA NEW GUINEA: [Morobe Prov.], Bulolo Vatut [7°15'S 146°37'E], 700-800 m, 1.-7.VI.1969, leg. J. Sedlacek, 7/10 deposited in ANIC and 8/10 deposited in MNCN; 1♂ larva (9/10) BPBM, PAPUA NEW GUINEA: [Morobe Prov.], Wau, 1150-1250 m, 17.II.1966, leg. J. Sedlacek; 1♀ larva (10/10) BPBM, PAPUA NEW GUINEA: [Central



Prov.], Mt. Chapman, 7°19'S 145°48'E, 2000 m, 5.V.1966, leg. J. L. Gressitt.

Derivatio nominis: The species is named after the type locality.

Measurements, holotype ♀: Pronotum length 5.07 mm, pronotum lobe width 4.16 mm, pronotum height 2.6 mm, postfemur length 5.2 mm, postfemur width 1.82 mm, vertex width 1 mm, eye width 0.36 mm. Paratypes ♀♀ (1/8-8-8): Pronotum length 4.8-5.44 mm, pronotum lobe width 3.76-4.48 mm, pronotum height 2.08-2.56 mm, postfemur length 4.48-5.12 mm, postfemur width 1.68-1.84 mm, vertex width 0.8-0.88 mm, eye width 0.34-0.44 mm.

Description: Rather small micropronotal species with an elevated medial carina at the tip of the fastigium. Fastigium reaching the frontal margin of the eyes, the anterior border nearly straight. Anterior half of the Vertex not lower than the posterior half. Fossulae deep. Vertex nearly 3x broader than an eye. Lateral and secondary carinae nearly u-shaped, not reaching the median carina. Lateral carinae curved strongly inwards. Secondary carinae approximately obsolete. Medial carina starts near the anterior border of the fastigium, strongly elevated and broadly. In lateral view visible above the eyes. Frontal costa not elevated. Fascial carinae in lateral view arched before the antennae. Scutellum in frontal view moderately broad. Furcation of the frontal costa slightly above the superior ocelli. Superior ocelli in line of the lower margin of the eyes. Eyes subcircular, their dorsal margin not extending above the fastigium. Eyes not touching the anterior margin of the pronotum. Antennae inserted about 1x deeper than the diameter of an antennal groove below the lower margin of the eyes. Pronotum, in lateral view, with one elevation in the anterior half and two lateral elevations above the middle femora. The first elevation starts at the posterior end of the prozona. The median carina slightly increasing posteriorly. Some smaller humps on the pronotum. Anterior border of the pronotum straight. Median carina in the prozona absent. Prozonal carinae longer and lamellate. Humeral angles, interhumeral carinae and internal lateral carinae absent. Infrascapular area broader, the dorsal margin strongly undulated, reaching the end of the pronotum. Lateral lobes strongly curved laterally and slightly rounded. Pronotal process extending to the middle of the hind femora, the apex seen from above truncated and sulcated in the middle. Flight organs absent. The dorsal margin of the 9. tergite without any

tubercles. Ventral margin of the anterior and middle femora with 2-3 longer and broader lappets, the dorsal margins with lobes. Middle femora ventral without short hairs. Second segment of tarsus short. Hind femora moderately stout (2.8x longer than wide). The dorsal and median external area and the ventro-external carina with some different rounded elevations. The ventral margin of the hind femora with small lobes. Hind tibia brownish with lighter sections in the upper half. Genicular teeth medium sized, rounded. Antegenicular teeth medium sized, broad and acute. Last article of the tarsi shorter than the first. First and second pulvilli short and obtuse, the third obtuse pulvilli as long as the sum of the first and second. Colour brownish with some lighter sections on the infrascapular area and the posterior part of pronotum.

Differential diagnosis: Specific for *Gestroana morobensis* is the lamellate medial carina, in lateral view broadly visible above the eyes and the undulated dorsal margin of the infrascapular area. Only *Gestroana cyclophensis* sp. nov. has a medial carina visible above the eyes in lateral view. But this species has a height and serrulate pronotal crest. Distribution: Found on different places in Morobe Province and at Mt. Chapman in Central Province.

***Gestroana mounthagensis* sp. nov.** (Plate 75 fig. 4, plate 77 fig. 4, plate 79 fig. 4)

Holotype ♂ BPBM, PAPUA NEW GUINEA: [Western Highlands Prov.], Tomba, slopes of Mt. Hagen [5°50'S 144°01'E], 2450 m, 23.V.1963, leg. J. Sedlacek.

Derivatio nominis: The species is named after the type locality.

Measurements Holotype ♂: pronotum length 4.4 mm, pronotum lobe width 3.6 mm, pronotum height 2.32 mm, postfemur length 4.4 mm, postfemur width 1.76 mm, vertex width 0.88 mm, eye width 0.46 mm.

Description: Rather small micropronotal and wingless species. Fastigium not reaching the frontal margin of the eyes. Anterior half of the Vertex not lower than the posterior half. Fossulae deep. Vertex nearly 2x broader than an eye. Lateral and secondary carinae nearly rounded, not reaching the median carina. Lateral carinae curved strongly inwards. Secondary carinae curved transverse back to the medial carina. Medial carina starts near the anterior border of the fastigium, a little lamellate and forming a short ridge. In lateral view not visible above the eyes. Frontal costa between medial carina and scutellum absent. Fascial carinae, in lateral view, a little arched



before the antennae. Scutellum in frontal view broad. Furcation of the frontal costa absent. The scutellum is open upwards. Superior ocelli slightly under the line of the lower margin of the eyes. Eyes subcircular, their dorsal margin not extending above the fastigium. Eyes touching the anterior margin of the pronotum. Antennae inserted about 1x deeper than the diameter of an antennal groove below the lower margin of the eyes. Antennae short, with 3 lighter articles. Pronotum, in lateral view, with one arched elevation in the anterior half and one lower elevation in the posterior half. The first elevation starts at the posterior end of the prozona. The median carina is slightly increasing posteriorly. Some smaller humps on the pronotum. Anterior border of the pronotum straight. Median carina in the prozona existing only as a very small dot at the anterior margin. Prozonal carinae longer and a little lamellate. Humeral angles, interhumeral carinae and internal lateral carinae absent. Infrascapular area smaller, reaching the end of the pronotum. Lateral lobes strongly curved laterally and rounded. Pronotal process extending to the middle of the hind femora, the apex seen from above truncated without any sulcation. Flight organs absent. The dorsal margin of the 9. tergite with 4 very small tubercles. The dorsal margin of the 10. tergite with 2 tubercles. Ventral and dorsal margin of the anterior and middle femora undulated. Middle femora ventral with short hairs. Second segment of tarsus short. Hind femora stout (2.5x longer than wide). The dorsal and median external area with some rounded elevations. The ventro-external carina with a bigger and a smaller lobe. The ventral margin of the hind femora with small lobes. Hind tibia brown with two light bands. Genicular teeth medium sized, rounded. Antegenicular teeth broad and rounded. Last article of the tarsi shorter than the first. First and second pulvilli short and obtuse, the third obtuse pulvilli as long as the sum of the first and second. Colour brownish.

Differential diagnosis: Similar to *Gestroana moanemaniensis* and *Gestroana willemsei*. But the posterior part of the prozona of *Gestroana mounthagensis* is increasing and not flattened.

Distribution: Only found on Mt. Hagen.

***Gestroana pannosa* sp. nov.** (Plate 75 fig. 5, plate 77 fig. 5, plate 79 fig. 5)

Holotype ♀ BPBM, PAPUA NEW GUINEA: [Eastern Highlands Prov.], Purosa, 20-26 km SE Okapa [6°39'S 145°32'E], 1800-2020 m, 28.VIII.1964, leg. J. & M. Sedlacek.

Derivatio nominis: Named because of the long lappets at the ventral margin of the anterior and middle femora (Latin: "pannus").

Measurements: Pronotum length 4.4 mm, pronotum lobe width 4.16 mm, pronotum height 2.16 mm, postfemur length 4.4 mm, postfemur width 1.76 mm, vertex width 2.4 mm, eye width 0.34 mm.

Description: Rather small micropronotal species with long lappets at the ventral margin of the anterior and middle femora. Fastigium not reaching the frontal margin of the eyes, the anterior border nearly straight. Anterior half of the Vertex lower than the posterior half, covered with small tubercles. Fossulae deep. Vertex 2x broader than an eye. Lateral and secondary carinae nearly u-shaped, not reaching the median carina. Lateral carinae curved inwards. Secondary carinae almost obsolete. Medial carina existing only as a short and low ridge at the anterior margin in transition to the frontal costa. Frontal costa in lateral view not arched and not visible in front of the eyes. Fascial carinae in lateral view arched before the antennae. Scutellum in frontal view moderately broad. Furcation of the frontal costa slightly above the superior ocelli. Superior ocelli in line of the lower margin of the eyes. Eyes subcircular, their dorsal margin not extending above the fastigium. Eyes not touching the anterior margin of the pronotum. Antennae inserted about 1x deeper than the diameter of an antennal groove below the lower margin of the eyes. Pronotum in lateral view with two elevations, the posterior not as high as the anterior elevation. The first elevation starts at the posterior end of the prozona. In line of the lateral lobes in dorsal view three separate humps side by side. The second elevation starts above the beginning of the hind femora. Between the elevations is a broadly u-shaped depression. Some smaller humps on the pronotum. Anterior border of the pronotum straight. Median carina extending to the anterior border. Prozonal carinae straight. Humeral angles, interhumeral carinae and internal lateral carinae absent. Infrascapular area narrow, reaching the end of the pronotum. Lateral lobes strongly curved laterally broadly rounded. Pronotal process extending to the middle of the postfemur, the apex, seen from above, truncated and a little emarginated. Flight organs absent. The dorsal margin of the 8. and 9. tergite in extension of the posterior edges of the pronotum with two distinct tubercles curved posteriorly. Ventral margin of the anterior and middle femora with 2-3 long lappets, the dorsal margins with bigger lobes. Middle femora ventral with short hairs. Second





segment of tarsus short. Hind femora stout (2.5x longer than wide). The dorsal and median external area and the ventro-external carina with some rounded elevations. The ventral margin of the hind femora with small lobes. Hind tibia uniformly brown with a lighter antegenicular band. Genticular teeth medium sized and rounded. Antegenicular teeth relatively large and rounded. Between genticular- and antegenicular teeth a small lappet – perhaps the real antegenicular teeth. Last article of the tarsi nearly as long as the first. First and second pulvilli short and obtuse, the third obtuse pulvilli as long as the sum of the first and second.

Differential diagnosis: Specific for *Gestroana pannosa* are the long lappets on the ventral margin of the anterior and middle femora. Even *Gestroana yapenensis* sp. nov. and *Gestroana morobensis* sp. nov. have similar long lappets. But in dorsal view the apex of the pronotal process is different: narrow and rounded in *Gestroana yapenensis*, triangularly sulcated in *Gestroana morobensis* and slightly concave in *Gestroana pannosa*.

Distribution: Only found in Purosa near Okapa.

***Gestroana sedlaceki* sp. nov.** (Plate 75 fig. 6, plate 77 fig. 6, plate 79 fig. 6)

Holotype ♀ BPBM, PAPUA NEW GUINEA: [Eastern Highlands Prov.], Purosa, 20-26 km SE Okapa [6°39'S 145°32'E], 1800-2020 m, 28.VIII.1964, leg. J. & M. Sedlacek.

Derivatio nominis: Patronymic. The species is named after the collector Josef Sedlacek.

Measurements: Pronotum length 4.8 mm, pronotum lobe width 4.16 mm, pronotum height 2.72 mm, postfemur length 5 mm, postfemur width 2.15 mm, vertex width 0.94 mm, eye width 0.4 mm.

Description: Rather small micropronotal species. Head not exerted above the pronotum. Fastigium not reaching the frontal margin of the eyes, the anterior border nearly straight. Anterior half of the Vertex lower than the posterior half, covered with small tubercles. Fossulae moderately deep. Vertex 2x broader than an eye. Lateral and secondary carinae nearly u-shaped, not reaching the median carina. Secondary carinae almost absent. Medial carina existing only as a short elevation at the anterior margin in transition to the frontal costa, not visible in lateral view. Frontal costa in lateral view not arched and not visible in front of the eyes. Fascial carinae in lateral view arched before the antennae. Scutellum in frontal view broad. Furcation of the frontal costa above the superior ocelli. Superior ocelli in line of the lower margin

of the eyes. Eyes subcircular, their dorsal margin not extending above the fastigium. Eyes touching the anterior margin of the pronotum. Antennae inserted more than 1x deeper than the diameter of an antennal groove below the lower margin of the eyes. Pronotum, in lateral view, with two elevations, increasing posteriorly. The first one starts at the posterior end of the prozona. The second one is above the beginning of the hind femora. Between the elevations is a u-shaped depression. Some smaller humps on the pronotum. Anterior border of the pronotum straight. Median carina ends at the frontal border with a small tubercles. Prozonal carinae short and straight. Humeral angles, interhumeral carinae and internal lateral carinae absent. Infrascapular area narrow, reaching the end of the pronotum. Lateral lobes strongly curved laterally broadly rounded, the posterior margin truncated. Pronotal process not extending beyond the middle of the postfemur, the apex, seen from above, truncated and a little concave. Flight organs absent. The dorsal margin of the 9. tergite at the posterior margin with a series of small tubercles (like a denture). Dorsal and ventral margin of the anterior and middle femora with lobes, middle femora ventral with hairs. Second segment of tarsus short. Hind femora stout (2.3x longer than wide). The dorsal and median external area with some elevations. The ventral margin of the hind femora with lobes. Hind tibia uniformly brown. Genticular teeth medium sized. Antegenicular teeth relatively large and rounded. Last article of the tarsi nearly as long as the first. First and second pulvilli short and spinose, the third pulvilli as long as the sum of the first and second.

Differential diagnosis: Relatively short and broad pronotum with a u-shaped depression of the median carina. Pronotum increasing posteriorly. Found at the same location as *Gestroana pannosa* but definitely a different valid species. E.g. *Gestroana sedlaceki* does not have such long lappets on the ventral margin of the anterior and middle femora. *Gestroana pannosa* has only 2 distinct tubercles on the upper margin of the 9 tergite.

Distribution: Only found in the location of Purosa.

***Gestroana willemsei* sp. nov.** (Plate 75 figs 7-8, plate 77 figs 7-8, plate 79 figs 7-8)

Holotype ♂ NCB-RMNH, WEST PAPUA: Rattan Camp [3°30'S 139°09'E], 1200 m, 18.II.1939, leg. L. J. Toxopeus.

Paratypes 5♀, 3♂ (1/10-8/10) NCB-RMNH, WEST PAPUA: Rattan Camp [3°30'S 139°09'E], 1200 m, 18.II.1939, leg. L. J. Toxopeus; 1♂ (9/10) ZSM, West



Papua, Jajawijaja-Prov., Anggruk, Tanggeam [4° 16'S 139° 24'E], 1500-1800 m, 28.-29.IX.1991, leg. A. Riedel. 1♂ larva [?] (10/10) NCB-RMNH, WEST PAPUA: Rattan Camp [3° 30'S 139° 09'E], 1200 m, 18.II.1939, leg. L. J. Toxopeus.

Derivatio nominis: Patronymic. The species is named after an outstanding orthopterologist Cornelis Willemse.

Measurements, holotype ♂: Pronotum length 6.37 mm, pronotum lobe width 5.2 mm, pronotum height 3.8 mm, postfemur length 6.5 mm, postfemur width 2.73 mm, vertex width 1.12 mm, eye width 0.44 mm. Paratypes ♀♀: Pronotum length 6.76-7.54 mm, pronotum lobe width 5.85-5.98 mm, pronotum height 3.8-4.29 mm, postfemur length 6.89-7.54 mm, postfemur width 2.86-3.12 mm, vertex width 1.12-1.3 mm, eye width 0.42-0.54 mm. Paratypes ♂♂: Pronotum length 5.98-6.5 mm, pronotum lobe width 4.55-5.2 mm, pronotum height 2.8-3.64 mm, postfemur length 5.2-6.24 mm, postfemur width 2.08-2.6 mm, vertex width 0.96-1 mm, eye width 0.46-0.5 mm.

Description, holotype ♂: Rather small micropronotal and wingless species. Fastigium nearly reaching the frontal margin of the eyes, the anterior border nearly straight. Anterior half of the Vertex not lower than the posterior half. Fossulae deep. Vertex nearly 2.5x broader than an eye. Lateral and secondary carinae nearly u-shaped, not reaching the median carina. Lateral carinae curved strongly inwards. Secondary carinae almost obsolete. Medial carina existing only as a short elevation at the anterior margin in transition to the frontal costa, not visible in lateral view. Frontal costa not elevated. Fascial carinae in lateral view arched before the antennae. Scutellum in frontal view moderately broad. Furcation of the frontal costa slightly above the superior ocelli. Superior ocelli in line of the lower margin of the eyes. Eyes subcircular, their dorsal margin not extending above the fastigium. Eyes touching the anterior margin of the pronotum. Antennae inserted about 1x deeper than the diameter of an antennal groove below the lower margin of the eyes. Pronotum in lateral view with one elevation in the anterior half and two lateral elevations above the middle femora. The first elevation starts at the posterior end of the prozona. The increase of the elevation, in lateral view, is concave. The median carina not increasing posteriorly. Some smaller humps on the pronotum. Anterior border of the pronotum straight. Median carina in the prozona in lateral view slightly increasing to the anterior border. Prozonal carinae

longer and straight. Humeral angles, interhumeral carinae and internal lateral carinae absent. Infrascapular area narrow, reaching the end of the pronotum. Lateral lobes strongly curved laterally, slightly rounded. Pronotal process extending behind the middle of the hind femora, the apex, seen from above, truncated and slightly sulcated in the middle. Flight organs absent. The dorsal margin of the 8 tergite without one broader tubercle in the middle. Dorsal and ventral margin of the anterior and middle femora with lobes, middle femora ventral with hairs. Second segment of tarsus short. Hind femora moderately stout (2.7x longer than wide). The dorsal and median external area and the ventro-external carina with some rounded elevations. brown with a light antegenicular band. Genicular teeth small and rounded. Antegenicular teeth large, broad and acute. Last article of the tarsi nearly as long as the first. First and second pulvilli very short, the first nearly absent. The third pulvilli as long as the sum of the first and second. All pulvilli acute. All paratypes with the same characteristics. The male a little smaller. The paraprotum of the genital with two curved titillators. The apex of the titillators broadly obtuse.

Differential diagnosis: Specific for *Gestroana willemsei* is the concave increase of the anterior elevation of the pronotum in lateral view.

Distribution: Two localities in the mountains of the Jayawijaya Province.

***Gestroana yapenensis* sp. nov.** (Plate 74, fig 8, plate 76, fig 7, plate 78, fig 7)

Holotype ♀ BMNH, WEST PAPUA: Japen, Central Range, Mt. Oud, Camp 3, 3500 ft, XI.1938, leg. L. E. Cheesman.

Derivatio nominis: The species is named after the type locality the island of Yapen.

Measurements: Pronotum length 5.59 mm, pronotum lobe width 4.16 mm, pronotum height 2.34 mm, postfemur length 4.42 mm, postfemur width 1.82 mm, vertex width 1.06 mm, eye width 0.4 mm.

Description: Rather small micropronotal species with a narrow and rounded apex of the pronotum. Fastigium not reaching the frontal margin of the eyes, the anterior border nearly straight. Anterior half of the vertex a little lower than the posterior half. Fossulae moderately deep. Vertex more than 2x broader than an eye. Lateral and secondary carinae nearly u-shaped, not reaching the median carina. Lateral carinae short. Secondary carinae approximately obsolete. Medial carina and frontal costa above the fascial carinae absent.



Fascial carinae, in lateral view, arched before the antennae. Scutellum in frontal view moderately broad, circular. Fascial carinae above the scutellum narrow and straight. Furcation of the frontal costa slightly above the superior ocelli. Superior ocelli in line of the lower margin of the eyes. Eyes subcircular, their dorsal margin not extending above the fastigium. Eyes not touching the anterior margin of the pronotum. Antennae inserted about 1x deeper than the diameter of an antennal groove below the lower margin of the eyes. Pronotum, in lateral view, with one elevation in the anterior half and two lateral elevations above the middle femora. The first elevation starts a little behind the posterior end of the prozona. The median carina slightly increasing posteriorly. Some smaller humps on the pronotum. Anterior border of the pronotum straight. Median carina in the prozona almost absent. Prozonal carinae short and straight. Humeral angles, interhumeral carinae and internal lateral carinae absent. Infrascapular area narrow, reaching the end of the pronotum. Lateral lobes strongly curved laterally, rectangular. Pronotal process extending to the start of the knee, the apex seen from above narrow and rounded. Flight organs

absent. The dorsal margin of the 9. tergite without any tubercles. Ventral margin of the anterior and middle femora with 2-3 longer lappets, the dorsal margins undulated. Middle femora ventral without short hairs. Second segment of tarsus short. Hind femora stout (2.4x longer than wide). The dorsal and median external area with some rounded elevations. The ventral margin of the hind femora with small lobes. Hind tibia consistently brownish. Genicular teeth medium sized and acute. Antegenicular teeth relatively large and acute. Last article of the tarsi nearly as long as the first. First and second pulvilli short and obtuse, the third obtuse pulvilli as long as the sum of first and second.

Differential diagnosis: Characteristic for *Gestroana yapenensis* are the long lappets on the ventral margin of the anterior and middle femora (like *Gestroana pannosa* sp. nov.). Specific is the absence of the medial carina.

Distribution: Only found in the mountains of the island of Yapen.

### Key to species of *Gestroana* Berg, 1900

- 1 Antennae inserted 2x deeper than the diameter of an antennal groove below the lower margin of the eyes ..... *Gestroana kleukersi* sp. nov.
- Antennae inserted 1x deeper as the diameter of an antennal groove under the lower margin of the eyes ..... 2
- 2 Apex of the pronotal process seen from above curved broadly concave ..... 3
- Apex of the pronotal process seen from above nearly straight or slightly notched or emarginated or rounded ..... 5
- 3 Large humps on the outside of the hind femora ..... *Gestroana cyclopensis* sp. nov.
- Only small tubercles on the outside of the hind femora ..... 4
- 4 Elevation of the pronotal crest starts at the anterior margin of the pronotum ..... *Gestroana discoidea* (Bolívar, 1898)
- Elevation of the pronotal crest starts at the posterior end of the prozona ..... *Gestroana karimuiensis* sp. nov.
- 5 Anterior and middle femora ventral with 2-3 long lappets ..... 6
- Anterior and middle femora ventral with smaller lobes or undulated ..... 8
- 6 Apex of the pronotal process seen from above narrow and rounded ..... *Gestroana yapenensis* sp. nov.
- Apex of the pronotal process seen from above broader and not rounded ..... 7
- 7 Apex of the pronotal process seen from above slightly concave ..... *Gestroana pannosa* sp. nov.
- Apex of the pronotal process seen from above straight with a triangularly furcation in the middle ..... *Gestroana morobensis* sp. nov.
- 8 Middle and posterior third of the dorsal margin of the infrascapular area straight. .... *Gestroana bayerriveriensis* sp. nov.
- Middle and posterior third of the dorsal margin of the infrascapular area straight, at least partial arched or undulated ..... 9
- 9 Antegenicular teeth distinctly large and like a lappet, nearly 2x broader than the Genicular teeth ..... 10
- Antegenicular teeth small, nearly as broad as the Genicular teeth ..... 12
- 10 Pronotum in lateral view with two elevations; between the elevations a u-shaped depression ..... *Gestroana sedlaceki* sp. nov.



- Pronotum in lateral view with one elevation in the anterior half; in the posterior half flattened or slightly increasing ..... 10
- 10 Median carina in lateral view in the posterior half undulated and increasing .....  
..... *Gestroana mounthagensis* sp. nov.
- Median carina in lateral view in the posterior half flattened ..... 11
- 11 Elevation of the median carina and the lateral elevations as three separate elevations .....  
..... *Gestroana moanemaniensis* sp. nov.
- Elevation of the median carina and the lateral elevations as one connected elevation .....  
..... *Gestroana willemsei* sp. nov.
- 12 In lateral view the pronotum with two nearly identical high elevations .... *Gestroana bicristulata* (Günther, 1938)
- In lateral view the pronotum with two elevations, the posterior distinctly lower than the anterior elevation ..... 13
- 13 Outside of the hind femora with several rounded elevations..... *Gestroana flasbarthi* sp. nov.
- Outside of the hind femora with only one elevation ..... *Gestroana gressitti* sp. nov.

**Holoarcus Hancock, 1909**

Type species: *Holoarcus altinotus* Hancock, 1909.

*Holoarcus altinotus* is a valid species and *Holoarcus* Hancock, 1909 is a valid genus. Hancock established the genus with the type species *Holoarcus altinotus* and included *Piezotettix arcuatus*, Haan, (= *Holoarcus arcuatus* (Haan, 1842)) and *Piezotettix sulcatus* (Stål, 1877) (= *Piezotettix sulcatus* (Bolívar, 1887) comb. nov.) in this new genus. *Holoarcus arcuatus* belongs to this genus and in this paper I allocate *Piezotettix sulcatus* again as part of the genus *Piezotettix* Bolívar, 1887. Günther (1934) synonymized *Holoarcus* Hancock, 1909 with *Dolatettix* Hancock, 1907 but in 1979 he again split them up in *Dolatettix* Hancock, 1907 and *Holoarcus* Hancock, 1909. Otte (1997) declares *Holoarcus* Hancock, 1909 as a synonym of *Dolatettix* Hancock, 1907 and *Holoarcus altinotus* as a synonym of *Holoarcus arcuatus*. Both allocations are not correct, since both are valid genera and valid species as Günther (1979) had already stated. According to my research I concede with Günther's allocations.

Diagnosis: *Holoarcus* Hancock, 1909 is well characterized by the foliaceous pronotal crest. The smaller species of *Dolatettix* Hancock, 1907 are distinguished from *Holoarcus* Hancock, 1909 in lateral view by a very clearly visible frontal horn (plate 71 fig. 7). *Hymenotes* Westwood, 1837 and *Hypsaeus* Bolívar, 1887 have in lateral view a typical triangular pronotum. *Piezotettix* Bolívar, 1887 and *Boczkittettix* gen. nov. have a nearly tectiform pronotum with an unforked dorsal margin.

Distribution: Six species found on New Guinea and adjacent isles (Aru, Misool).

***Holoarcus altinotus* Hancock, 1909** (Plate 80 figs 1-3)

Holotype ♀ OUMNH, WEST PAPUA: Aru, leg. Wallace.

Differential diagnosis: The dorsal line of the pronotum is not undulated anywhere, in its highest part flattened and not rounded.

Distribution: Only found on Aru Islands.

***Holoarcus arcuatus* (Haan, 1842)** (Plate 80 figs 4-9)

Lectotype ♀ OUMNH, [WEST PAPUA] NEW GUINEA.

The lectotype specimen has a type-label and I designate it as the Lectotype. A label with further information is lost.

Paralectotype ♂ (1/1) NCB-RMNH, [WEST PAPUA]: N. Guinea, leg. Muller.

Haan describes in his paper a male and a female from New Guinea (leg. Müller). According to my research the specimens must have been collected in 1828 by Salomon Müller in Lobo (3° 45'S 134° 07'E). I designate these specimens as lectotype and paralectotype.

Additional material: WEST PAPUA: 3♀, 2♂ NCB-RMNH, N. Guinea, leg. Muller; 1♂ BPBM, S. Geelvink Bay, Nabire [3° 22'S 135° 28'E], 10-15 m, 1.-5.IX.1962, leg. J. Sedlacek; 1♂ BPBM, S. Geelvink Bay, Nabire [3° 22'S 135° 28'E], 0-30 m, 2.-9.VII.1962, leg. J. L. Gressitt; 2♂ BPBM, Vogelkop, Bomberi, 700-900m, 10.VI.1959, leg. T. C. Maa; 1♀ BPBM, Vogelkop, Bomberi, 700-900 m, 7.VI.1959, leg. T. C. Maa; 1♀ BPBM, Vogelkop, S.coast of Bomberai, Fak Fak [2° 55'S 132° 18'E], 10-100 m, 11.VI.1959, leg. J. L. Gressitt; 2♂ NCB-RMNH, Etnabaai: 15. + 24.XI.1939, Nieuw Guinea Exp. K.N.A.G. 1939; 1♂ NCB-RMNH, Gariau en Lake Jamoer (3° 38'S 135° 01'E), 10.XII.1954, leg. L. D. Brongersma.

Synonymy: Bolívar (1887) examined the type specimen of *Choriophyllum granulatum* Costa, 1864 (Nr. 1688) of the museum of Naples and synonymized it with *Holoarcus arcuatus*. It is uncertain where the specimen of *Choriophyllum granulatum* originated from and whether it is in fact a synonym. Unfortunately, I did not have the opportunity to review this particular specimen.

Differential diagnosis: Haan's drawing



shows an exactly rounded pronotum without any indentations. The drawing completely matches the types that I reviewed. The pronotum that is evenly rounded along its entire length makes this type clearly identifiable among the so far known species. Distribution: Found in the west of West Papua.

***Holoarcus belingae* (Günther, 1929)** (Plate 80 fig. 13)

Holotype ♂ ZMHU, PAPUA NEW GUINEA: Neu-Guinea [Madang Prov., Astrolabe Bay (5°30'S 145°30'E)], 11.VII.[1896], leg. S. Lauterbach (DORSA: BxdolbelPM1).

Note: The specimen is labelled as allotype. According to Günther's description this specimen is the holotype.

Paratype (Allotype) ♀ ZMHU, PAPUA NEW GUINEA: Neu-Guinea [Madang Prov., Astrolabe Bay], FI[uss]. A, B. 742, 2. Lager, Hochwald [5°30'S 145°30'E], 24.VI.1896, Kaiser-Wilhelmsland-Expedition, leg. S. Lauterbach (DORSA: BxdolbelHTF).

Note: The specimen is labelled as the (holo)type. According to Günther's description this specimen is the allotype.

Paratypes 1♀ ZMHU, PAPUA NEW GUINEA: Neu-Guinea [Madang Prov., Astrolabe Bay], Ssiganu Janu, Hochwald [5°30'S 145°30'E], 600 m, 13.VI.1896, Kaiser-Wilhelmsland-Expedition, leg. S. Lauterbach; 1♂ ZMHU, PAPUA NEW GUINEA: Neu-Guinea [Madang Prov., Astrolabe Bay], FI[uss]. A, 2. Lager, Hochwald [5°30'S 145°30'E], 27.VI.1896, Kaiser-Wilhelmsland-Expedition, leg. S. Lauterbach (DORSA: BxdolbelPM2); 1♂ larva ZMHU, PAPUA NEW GUINEA: Neu-Guinea [Madang Prov., Astrolabe Bay (5°30'S 145°30'E)], 22.VII.1896, Kaiser-Wilhelmsland-Expedition, leg. S. Lauterbach.

This specimen bears a paratype label, but Günther does not designate it as a paratype in his paper.

Additional material: PAPUA NEW GUINEA: 1♂, 1♂ larva ANIC, [Madang Prov.], Alexishafen-Matuka rd. nr. Madang, 1.VI.1967, leg. R. E. & R. M. Blackith; 1♀ ANIC, [Madang Prov.], Madang [5°13'S 145°48'E], 4.XI.1961, leg. H. L. Carson; 1♂ BPBM, [Madang Prov.], Madang [5°13'S 145°48'E], 5 m, leg. J. L. Gressitt; 1♂ ZSM, [West Sepik Prov.], Vanimo, 25B [2°41'S 141°18'E].

Distribution: The type specimens found at the east coast of Papua New Guinea. There is one additional specimen found at Vanimo in the West Sepik Province.

***Holoarcus ferwillemsei* (Willemse, 1932) nom. nov.** (Plate 80 figs 10-12, plate 81 figs 1-3)

*Piezotettix truncata* Willemse, 1932 [description].

*Holoarcus belingae* (Günther, 1929) [Willemse (1933): synonymy].

Holotype ♂ IRSNB, WEST PAPUA: Siwi [1°30'S

134°02'E], 8.III.1929, leg. Prince Léopold.

Paratypes 1♀ IRSNB, WEST PAPUA: Siwi [1°30'S 134°02'E], 8.III.1929, leg. Prince Léopold; 1♀ NHME, WEST PAPUA: Sakoemi [2°12'S 133°21'E], 12.III.1929, leg. Prince Léopold.

Derivatio nominis: Patronymic. This species is named after the famous orthopterologist and very helpful friend Fer Willemse (1927-2009), the son of Cornelis Willemse.

Cornelis Willemse named this species as *Piezotettix truncata* in 1932. 1933 he synonymized this species with *Holoarcus belingae*. But he made two mistakes: it was a good species and not a synonym of *Holoarcus belingae* and he did not notice that Hancock (1909) already described another species named *Piezotettix truncatus* from Misool. *Holoarcus truncatus* from Willemse must be renamed as a secondary homonym after art. 57.3. of the International Code of Zoological Nomenclature (Kraus 2000).

Differential diagnosis: The posterior part of the pronotum from *Holoarcus ferwillemsei* is steeply sloping and undulated. This species is related to *Holoarcus belingae* (Günther, 1929) but the dorsal margin of the pronotum until the posterior angle is not completely rounded. In lateral view it is tectiform with a distinct angle in the middle. Günther (1979) synonymized this species and *Holoarcus intermedius* (Willemse, 1932) with *Holoarcus belingae* but this was wrong.

Distribution: Found on the Vogelkop peninsula. Note: One paratypic specimen of *Piezotettix truncatus* designated from Willemse (1932) did not belong to *Holoarcus ferwillemsei*: this specimen has pronotum rounded to the posterior end.

***Holoarcus intermedius* (Willemse, 1932) comb. nov.** (Plate 81 figs 4-9)

*Piezotettix intermedia* Willemse, 1932 [description].

*Holoarcus intermedius* (Willemse, 1932) [Willemse (1933): new combination].

*Dolatettix intermedius* (Willemse, 1932) [Günther (1938 a): new combination].

Holotype ♂ IRSNB, WEST PAPUA: Manoi, 2.III.1929, leg. Prince Léopold.

Paratypes 2♀, 1♂ IRSNB, WEST PAPUA: Manoi, 2.III.1929, leg. Prince Léopold; 1♀ NHME, WEST PAPUA: Manoi, 2.III.1929, leg. Prince Léopold.

Additional material: WEST PAPUA: 3♀, 2♂ NHME, Sorong, Kamp Bawe, 24.X.1948, leg. M. A. Lieftinck; 3♀, 1♂ NCB-RMNH, Sorong, Kamp Bawe, 24.X.1948, leg. M. A. Lieftinck; 1♀ NHME, Sorong, Malano, 2.IX.1948, leg. M. A. Lieftinck; 1♂ NHME, NW Guinea, Klamono



Oilfields [1°10'S 131°30'E], 18.VIII-24.VIII.1948, leg. M. A. Lieftinck; 1♀ OUMNH, New Guinea, N., leg. Wallace; 1♀ OUMNH, New Guinea, M., leg. Wallace; 1♀ OUMNH, Salawatti, ex. Coll. Leiden; 1♀ ZSM, Sorong-Prov., Kec. Salawatti, Walir Isl. [=Waiji Isl.], Kalobo, 0-20 m, 20.X.1996, leg. A. Riedel.

Differential diagnosis: The species has a foliaceous pronotum and belongs to *Holoarcus* Hancock, 1909, not to *Piezotettix* Bolívar, 1887 with its more tectiform pronotum. It is not a *Dolatettix*-species because a frontal horn is absent. *Holoarcus intermedius* is easy to identify, in lateral view, by the concave emargination at the posterior end of the pronotum.

Distribution: Only found in the west of West Papua.

Note: The pronotum in lateral view of the 3♀ from OUMNH is more flattened in the middle.

***Holoarcus truncatus* (Hancock, 1909) comb. nov.**  
(Plate 81 figs 10-12)

*Piezotettix truncatus* Hancock, 1909 [description].  
Holotype ♂ OUMNH, WEST PAPUA: Mysol, leg. Wallace.

Hancock designated one female (leg. Wallace) as the type specimen from Morotai Island. The type specimen in OUMNH is from Misool (leg. Wallace) and it is a male.

Even an intensive search in OUMNH collection did not produce any specimen from Morotai Island. Hancock's diagnosis corresponds exactly with the examined specimen. Therefore I assume that the holotype is the female of Misool and I labelled it accordingly.

Differential diagnosis: Pronotum rounded like *Holoarcus arcuatus*. At the posterior apex is a small incision.

Distribution: Only found on the island of Misool.

### Key to species of *Holoarcus* Hancock, 1909

- 1 Dorsal line of the pronotum not emarginated anywhere, not even in front of the posterior apex ..... 2
- Dorsal line of the pronotum undulated or emarginated in the posterior part ..... 3
- 2 Dorsal line of the pronotum in the middle part flattened ..... *Holoarcus altinotus* Hancock, 1909
- Dorsal line of the pronotum all over rounded ..... *Holoarcus arcuatus* (Haan, 1842)
- 3 Posterior part of the pronotum rounded; only the end undulated or emarginated but not steeply sloping ..... 4
- Posterior part of the pronotum steeply sloping ..... 5
- 4 Dorsal line of the pronotum in the middle part all over rounded ..... *Holoarcus belingae* (Günther, 1929)
- Dorsal line of the pronotum in the middle part with a distinct angle .....  
..... *Holoarcus ferwillemsei* (Willemse, 1932) nom. nov.
- 5 Posterior part of the pronotum slightly undulated with a concave emargination .....  
..... *Holoarcus intermedius* (Willemse, 1932) comb. nov.
- Only a small emargination before the posterior apex of the pronotum .....  
..... *Holoarcus truncatus* (Hancock, 1909) comb. nov.

### ***Hymenotes* Westwood, 1837**

Type species: *Hymenotes triangularis* Westwood, 1837.

Distribution: This genus is only found on the Philippines.

### ***Hymenotes triangularis* Westwood, 1837**

Type MNMS: PHILLIPINES.

Note: *Hymenotes bolivari* Kirby, 1910 is a synonym (Günther 1938a).

### ***Hypsaeus* Bolívar, 1887**

Type species: *Hypsaeus westwoodi* Bolívar, 1887.

***Hypsaeus westwoodi* Bolívar, 1887** (Plate 70 figs 7-9)

Holotype ♂ NHRS, PHILLIPINES: Ins. Philipp., leg. Semper (NRM-ORTH 12918).

### ***Ichikawatettix* gen. nov.**

Type species: *Ichikawatettix exsertus* (Günther, 1938) **comb. nov.**

Derivatio nominis: Patronymic. The genus is named after Akihiko Ichikawa, a famous Japanese orthopterologist.

Description: The eyes of the *Ichikawatettix*-species are exerted or strongly exerted above the pronotum. *Ichikawatettix* gen. nov. is allocated to the Cladonotinae because the scutellum is widened. All species are miropnotal and have no wings. The short antenna inserted below the lower



margin of the eyes.

Differential diagnosis: *Ichikawatettix exsertus* (Günther, 1938) as the new genotype of *Ichikawatettix* gen. nov. is described by Günther (1938b) and assigned by him to *Amphinotus* Hancock, 1915. The genotype from *Amphinotus* Hancock, 1915 is *Amphinotus pygmaeus* Hancock, 1915 from Ceylon. The eyes of *Amphinotus pygmaeus* are not extending above the pronotum and the scutellum is not specifically widened (see the drawings by Hebard, 1932). Günther (1979) stated, the known species of *Amphinotus* Hancock, 1915 must be distributed to several genera. *Ichikawatettix* gen. nov. is related to some species of *Amphinotus* Hancock, 1915 and might be a different genus of Metrodorinae. Further research is required to determine the correct relationship. Distribution: Only known from New Guinea.

***Ichikawatettix detzeli* sp. nov.** (Plate 82, figs 1-3)

Holotype ♂ BPBM, WEST PAPUA: Bodem, 11 km SE of Oerberfaren [1° 58'S 138° 44'E], 100 m, 7.-17.VII.1959, leg. T. C. Maa.

Derivatio nominis: Patronymic. The species is named after Peter Detzel, a German orthopterologist and long time chairman of the German Society for Orthopterology.

Measurements: Pronotum length 3.9 mm, pronotum lobe width 2.9 mm, pronotum height 1.25 mm, postfemur length 4.45 mm, postfemur width 1.3 mm, vertex width 0.66 mm, eye width 0.4 mm.

Description: Small wingless and micropronotal species. Head with half of the eyes exerted above the pronotum. Fastigium not reaching the frontal margin of the eyes. Vertex broader than an eye. Transverse carinae obsolete. Lateral carinae curved inwards and running rounded downwards from the supraocular lobes to the medial carina but not reaching her. Medial carina in the posterior part obsolete, initiated in line of the supraocular lobes, arched but not reaching the frontal margin of the eyes and going down with a right angle and run over into the frontal costa. Fossulae moderately deep. Frontal costa in lateral view not projected before the eyes. Fascial carinae in lateral view flat projected before the antenna. Scutellum in frontal view moderately broad, gradually widened ventrad. Furcation of the frontal costa short over the superior ocelli, a little over the lower margin of the eyes. Superior ocelli in line with the lower margin of the eyes. Eyes subcircular, not touching the anterior margin of the pronotum. Their dorsal margin

extending above the fastigium. Antennae short. Upper margin of the antennal grooves more than one width of the antennal grooves below the lower margin of the eyes. Pronotum rugose with small tubercles and some flat depressions. Median carina extending to the anterior border, in the anterior half slightly increasing cephalad and arched in line of the lateral lobes. Prozonal carinae short and curved a little outwards behind. Humeral angles and interhumeral carinae absent. Infrascapular area with a larger black spot between the mid-coxa and the hind femur. Internal lateral carinae absent. Lateral lobes of the paranota rounded with a right angle, strongly curved laterally. Pronotal process not reaching the middle of the hind femora, broadly rounded. Tegmen and hind wings absent. Anterior femora ventral with two small lappets. The middle femora undulating. The second segment of the tarsus short. Hind femora slender (3.5x longer than wide). Genuic- and antegenicular teeth small. The ventro-external carina with one small lappets curved laterally. Posttibia brown with one white bands at the upper margin. Pulvilli acute. Colour light brown with some black parts. Only with some very short hairs.

Differential diagnosis: *Ichikawatettix detzeli* is not hairy like the other two species. Further differences to the other two species are: the hind femur is slender; the fastigium, in frontal view, is smaller between the eyes and the scutellum is gradually widened ventrad.

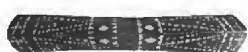
Distribution: Only known in the same region as *Ichikawatettix kleinertae* sp. nov. near Bodem at the northern coast of West Papua.

***Ichikawatettix exsertus* (Günther, 1938) comb. nov.** (Plate 82 figs 4-9)

*Amphinotus exsertus* Günther, 1938 [description]. Holotype ♀ ZMHU, PAPUA NEW GUINEA: [East Sepik Prov.] Etappenberg (Nr. 201) [4° 38'S 142° 28'E], 850 m, 2.-5.XI.1912 (leg. S. G. Bürgers).

Additional material: 1♂ ZMHU PAPUA NEW GUINEA: [East Sepik Prov.] Etappenberg (Nr. 203) [4° 38'S 142° 28'E], 13.-16.XI.1912 (leg. S. G. Bürgers); 1♂ larva ZMHU, PAPUA NEW GUINEA: [East Sepik Prov.] Lordberg (Nr. 215) [4° 50'S 142° 29'E], 29.-30.XI.1912 (leg. S. G. Bürgers); 1♀ BPBM, PAPUA NEW GUINEA: [West Sepik Prov.], Samoro (big leaf herb melastoma) [3° 45'S 142° 05'E], 1100 m, 11.V.1975, leg. J. L. Gressitt.

Measurements, holotype ♀: Pronotum length 4 mm, pronotum lobe width 3.04 mm, pronotum height 1.8 mm, postfemur length 4.72 mm, postfemur width 1.68 mm, vertex width 0.82



mm, eye width 0.5 mm. ♂ ZMHU: Pronotum length 3.92 mm, pronotum lobe width 2.88 mm, pronotum height 1.7 mm, postfemur length 4.5 mm, postfemur width 1.7 mm, vertex width 0.7 mm, eye width 0.52 mm. ♀ BPBM: Pronotum length 3.84 mm, pronotum lobe width 3.12 mm, pronotum height 1.75 mm, postfemur length 4.8 mm, postfemur width 1.52 mm, vertex width 0.9 mm, eye width 0.48 mm.

Description: The male is only a little bit smaller and corresponds in all characteristic features with the female.

Differential diagnosis: See the next species.

Distribution: Found only in the mountains of the upper Sepik River system.

***Ichikawatettix kleinertae* sp. nov.** (Plate 82 figs 10-15)

Holotype ♀ BPBM, WEST PAPUA: Bodem, 11 km SE of Oberfaren [1°58'S 138°44'E], 100 m, 7.-17.VII.1959, leg. T. C. Maa.

Paratype 1♂ BPBM, WEST PAPUA: Bodem, 11 km SE of Oerberfaren [1°58'S 138°44'E], 100 m, 7.-17.VII.1959, leg. T. C. Maa, in ZFMK.

Derivatio nominis: Patronymic. The species is named after Heidrun Kleinert, a German orthopterologist, who built up the German Orthopterologist Society.

Measurements, holotype ♀: Pronotum length 3.15 mm, pronotum lobe width 2.6 mm, pronotum height 1.5 mm, postfemur length 3.4 mm, postfemur width 1.3 mm, vertex width 0.52 mm, eye width 0.38 mm. Paratype ♂: pronotum length 2.95 mm, pronotum lobe width 2.4 mm, pronotum height 1.1 mm, postfemur length 3.1 mm, postfemur width 1.1 mm, vertex width 0.52 mm, eye width 0.34 mm.

Description, holotype ♀: Very small wingless and micropronotal species with a hairy body. Head with half of the eyes exerted above the pronotum. Fastigium not reaching the frontal margin of the eyes. Anterior border of the fastigium slightly rounded, curved back to the medial carina. Vertex broader than an eye. Transverse carinae obsolete. Lateral carinae short, curved inwards. Medial

carina in the posterior part absent, initiated in line of the supraocular lobes, arched and projected until the frontal margin of the eyes. Fossulae small and moderately deep. Frontal costa in lateral view not projected before the eyes. Fascial carinae in lateral view arched before the antenna. Scutellum in frontal view broad. Furcation of the frontal costa short over the superior ocelli, a little over the lower margin of the eyes. Superior ocelli in line with the lower margin of the eyes. Eyes subcircular, not touching the anterior margin of the pronotum. Their dorsal margin extending a little above the fastigium. Antennae short. Upper margin of the antennal grooves below the lower margin of the eyes. Pronotum with tubercles and some flat depressions. Median carina extending to the anterior border, undulating and arched in line of the lateral lobes. Prozonal carinae short and curved a little outwards behind. Humeral angles and interhumeral carinae absent. Infrascapular area with a concave part posterior. Internal lateral carinae absent. Lateral lobes of the paranota broadly rounded, strongly curved laterally. Pronotal process reaching the middle of the hind femora, truncated and triangularly sulcate. Tegmen and hind wings absent. Anterior and middle femora at the ventral margin with two small lappets and numerous short hairs. The second segment of the tarsus short. Hind femora moderately stout (2.5x longer than wide). Genicular teeth small. Antegenicular teeth smaller than Genicular teeth. Posttibia brown with one white band at the upper margin. Pulvilli acute. Colour brown with some light parts. All parts of the body, pronotum and legs covered with short hairs. The male is identical with the female but a little smaller.

Differential diagnosis: *Ichikawatettix kleinertae* is smaller than the other two species. The hairy body and the hind femur are like *Ichikawatettix exsertus*. But the antennal grooves are closer to the dorsal margin of the eyes.

Distribution: Only known near Bodem at the northern coast of West Papua.

**Key to species of *Ichikawatettix* gen. nov.**

- 1 Antennal grooves at least one diameter below the lower margin of the eyes ..... 2
- Antennal grooves under one diameter below the lower margin of the eyes ..... *Ichikawatettix kleinertae* sp. nov.
- 2 Pronotal process rounded posteriorly ..... *Ichikawatettix detzeli* sp. nov.
- Pronotal process sulcate posteriorly ..... *Ichikawatettix exsertus* (Günther, 1938)





***Ingrischitettix* gen. nov.**

Type species: *Ingrischitettix mountalbilalaensis* sp. nov.

Derivatio nominis: Patronymic. The genus is named after Sigfrid Ingrisch, a fabulous German orthopterologist.

Description: Medial carina in the frontal section going upwards and rounded over and before the eyes. Transverse carinae u-shaped, not reaching the median carina. Scutellum widened, the fascial carinae a long distance parallel. Pronotum tectiform. Internal lateral carinae absent. Flight organs absent. Lateral lobes slightly curved laterally. Second segment of tarsus of the anterior femora and middle femora extended. Ventro-external carinae of the hind femur with two small lappets curved laterally.

Differential diagnosis: I am not aware of any other genus from New Guinea or South-East Asia similar to *Ingrischitettix* gen. nov. yet. *Ingrischitettix* gen. nov. comes most closely to the South- and Central-American genus *Metrodora* Bolívar, 1887. Especially the elevated tip of the fastigium, the tectiform pronotum and the U-shaped transverse carinae resembles *Ingrischitettix* gen. nov. on *Metrodora* Bolívar, 1887. But they have the following differences: in *Ingrischitettix* gen. nov. the internal lateral carinae are absent, the lateral lobes are small, rounded and slightly curved laterally. In *Metrodora* Bolívar, 1887 they are strongly curved laterally and often are spinose. The upper margin of the antennal grooves in *Ingrischitettix* gen. nov. is in line with the lower margin of the eyes and not as deep as in *Metrodora* Bolívar, 1887.

Distribution: Only known from the Mt. Albilala of Finisterre Range, New Guinea.

***Ingrischitettix mountalbilalaensis* sp. nov.** (Plate 84 figs 1-6)

Holotype ♂ BPBM, PAPUA NEW GUINEA: Morobe Prov., Finisterre Mts., Mt. Abilala, stn. no. 102, c. 9000 ft, 19.-22.XI.1964, leg. M. E. Bacchus.

Paratypes 1♀ (1/3), 1♂ (2/3) BPBM, PAPUA NEW GUINEA: Morobe Prov., Finisterre Mts., Mt. Abilala, stn. no. 102, c. 9000 ft, 19.-22.XI.1964, leg. M. E. Bacchus, 1♂ (2/3) is deposited in ZFMK; 1♀ larva (3/3) BPBM, PAPUA NEW GUINEA: Morobe Prov., Finisterre Mts., Mt. Abilala, stn. no. 102, c. 9000 ft, 19.-22.XI.1964, leg. M. E. Bacchus.

Derivatio nominis: The species is named after the type locality.

Measurements, holotype ♂: Pronotum length 5.36 mm, pronotum lobe width 2.72 mm,

pronotum height 2.08 mm, postfemur length 1.52 mm, postfemur width 4.32 mm, vertex width 0.9 mm, eye width 0.3 mm. Paratype 1/2 ♀: Pronotum length 5.56 mm, pronotum lobe width 3.04 mm, pronotum height 2.48 mm, postfemur length 4.8 mm, postfemur width 1.84 mm, vertex width 0.92 mm, eye width 0.4 mm. Paratype 2/2 ♂: Pronotum length 4.72 mm, pronotum lobe width 2.64 mm, pronotum height 2.08 mm, postfemur length 4.4 mm, postfemur width 1.52 mm, vertex width 0.82 mm, eye width 0.42 mm.

Description, holotype ♂: Rather small wingless and brachypronotal species with a tectiform pronotum. Head lower than the fastigium and pronotum. Fastigium projecting before and above the eyes, in lateral view rounded. Anterior border in dorsal view a little projected before the eyes. Vertex slightly convex with relatively deep fossulae, 2x broader than an eye. Transverse and lateral carinae u-shaped, not reaching the median carina and in lateral view visible above the eyes. Medial carina beginning in line with the supraocular lobes, strongly elevated above and before the eyes. Frontal costa in lateral view not projected before the eyes. Fascial carinae, in lateral view, flattened arched and projected before the antenna beginning a little over the ventral margin of the eyes. Furcation of the frontal costa, in frontal view, started in line with the middle of the eyes a little above the superior ocelli. Superior ocelli in line with the lower third of the eyes. Scutellum relatively long and narrow, a little broader than an antennal groove. Eyes subcircular, their dorsal margin lower than the fastigium. Eyes almost touching the anterior margin of the pronotum. Upper margin of the antennal grooves in line with the lower margin of the eyes. Flagellum of the antennae with 13 articles. Pronotum tectiform, coarse, the anterior border straight. Median carina arched and extending to the anterior border. Prozonal carinae curved outwards towards the anterior border. Interhumeral carinae distinct. Infrascapular area, with an undulated dorsal margin reaching the apex of the pronotum, narrow posteriorly. Internal lateral carinae absent. Lateral lobes curved laterally, broadly rounded. Pronotal process, seen from above, trapezoidal. Tegmen and wings absent. Anterior and middle femora relatively slender, the dorsal margin undulated. Middle femora dorsal without hairs. Second segment of the tarsus slightly extended. Hind femora moderately slender (2.6-2.8x longer than wide), dorsal margin in dorsal view undulated. The ventral margin of the hind femur with one small lappet in the middle. Dorso- and ventro-external carina



without projections. Hind tibia with a light band in the upper half. Genuic- and antegenic teeth small. Last article of the tarsi half the length of the first. First and second pulvilli very small and acute. The female is only a little bigger and corresponds in all characteristic features with the male.

Distribution: Only known from the Mt. Albilala of Finisterre Range, New Guinea.

**Misythus Stål, 1877**

Type species: *Hypsaeus westwoodi* Bolívar, 1887.

Till now, 27 species and 2 subspecies have been described. All information, descriptions of 21 new species, and an identification key are published by Hebard (1923). I took pictures of the types in NHRS.

Distribution: All species found on the Philippines.

**Misythus echinatus (Stål, 1877)** (Plate 83 figs 1-3)

Holotype ♂, NHRS: PHILLIPINES: Ins. Philipp., leg. Semper (NRM-ORTH 12925).

**Misythus securifer (Walker, 1871)** (Plate 83 figs 4-9)

= *Misythus histrionicus* Stål, 1877

Holotype ♂ NHRS, PHILLIPINES: Ins. Philipp., leg. Semper (NRM-ORTH 12928).

Allotype ♀ NHRS, PHILLIPINES: Ins. Philipp., leg. Semper (NRM-ORTH 12927).

**Misythus laminatus laminatus Stål, 1877** (Plate 83 figs 10-12)

Holotype ♂ NHRS, PHILLIPINES: Ins. Philipp., leg. Semper (NRM-ORTH 12931).

**Nesotettix Holdhaus, 1909**

Type species: *Nesotettix samoensis* Holdhaus, 1909.

Distribution: New Caledonia and Samoa.

**Nesotettix cheesmanae Günther, 1938**

Holotype ♀ BMNH, NEW CALEDONIA: Bourail, XII.1930, leg. L. E. Cheesman.

Distribution: Only found at the type locality on New Caledonia.

**Nesotettix samoensis Holdhaus, 1909**

Holotype ♀ NMW, SAMOA: Upolu.

Distribution: Samoa.

**Paraphyllum Hancock, 1913**

Type species: *Paraphyllum antennatum* Hancock, 1913.

Distribution: Borneo.

**Paraphyllum antennatum Hancock, 1913** (Plate 91 figs 7-9)

Holotype ♀ ANSP, MALAYSIA: Borneo, Mt. Penrissen, V.1899.

Differential diagnosis: The scutellum is only a little widened and it is doubtful that *Paraphyllum antennatum* belongs to the Cladonotinae. Together with *Stegaceps brevicornis* it is the only known South-East-Asian specimen of Cladonotinae with tegmen and long hind wings. The species looks similar to some genera of the African Xerophyllini.

Distribution: Only found at Mt. Penrissen on Borneo.

**Peraxelpta Sjöstedt, 1931**

Type species: *Peraxelpta monstrosa* Sjöstedt, 1931.

Distribution: Australia

Note: The name *Paraxelpta* used by Otte (1997) for the genus is not correct. *Peraxelpta* Sjöstedt, 1931 is the valid name for the genus given by Sjöstedt (1931). *Paraxelpta* is a wrong name.

**Peraxelpta monstrosa Sjöstedt, 1931**

Holotype ♂ QM, AUSTRALIA: Queensland, Mt. Tambourine, 28.X.1912, leg. H. Hacker.

Distribution: Only found at Mt. Tambourine in Australia.

**Piezotettix Bolívar, 1887**

Type species: *Piezotettix cultratus* (Stål, 1877).  
Differential diagnosis: *Piezotettix* Bolívar, 1887 is related to *Holoarcus* Hancock, 1909 and *Dolatettix* Hancock, 1907 from New Guinea. But the leaf-like pronotum is lower and shorter at the posterior part. The pronotal process, seen from above, is broadly obtuse posteriorly and with concave parts between the median carina and external lateral carinae.

Distribution: Two species only found on the Philippines.

**Piezotettix cultratus (Stål, 1877)** (Plate 84 figs 7-9)

Holotype ♀ NHRS, PHILLIPINES: Ins. Philipp. (NRM-ORTH 12919).

**Piezotettix sulcatus (Stål, 1877) comb. nov.** (Plate 84 figs 10-15)

*Hymenotes sulcatus* Stål, 1877 [description]  
*Piezotettix sulcatus* (Stål, 1877) [Bolívar (1887): new combination]



*Dolatettix sulcatus* (Stål, 1877) [Günther (1938a): new combination]

Holotype ♀ NHRS, PHILLIPINES: Ins. Philipp., leg. Semper (NRM-ORTH 12920).

Paratype 1♀ NHRS, PHILLIPINES: Ins. Philipp., leg. Semper (NRM-ORTH 12921).

Additional material: 1♀, 1♂ NCB-RMNH, PHILLIPINES: Mindanao, Surigao; 1♀ NHRS, PHILLIPINES: S.. Luzon, Albay.

***Planotettix* gen. nov.**

Type species: *Planotettix planus* sp. nov.

Derivatio nominis: The name refers to the flattened or extremely flattened species of this genus.

Diagnosis: *Planotettix* gen. nov. is closely related to *Eurymorphopus* Hancock, 1907. In both genera all species are small and extremely flattened. The two *Eurymorphopus*-species are brachypronotal, the *Planotettix*-species are micropronotal. In *Planotettix* gen. nov. the internal lateral carina is lost. In *Eurymorphopus* Hancock, 1907 the internal lateral carina is clearly visible. *Planotettix* gen. nov. is only found in New Guinea, meanwhile *Eurymorphopus* Hancock, 1907 is found on New Caledonia. The species of *Planotettix* gen. nov. are in comparison to the *Eurymorphopus*-species with a pronotum length of minimal 5 mm, small or very small. The pronotum length of the *Planotettix* gen. nov. is smaller than 5 mm.

Distribution: Papua New Guinea.

***Planotettix astrolabebayensis* sp. nov.** (Plate 85 fig. 1, plate 86 fig. 2, plate 87 fig. 1)

Holotype ♀ HNHM, PAPUA NEW GUINEA: [Madang Prov.], Astrolabe Bay, Erima [5°24'S 145°44'E], 1897, leg. Biró.

Derivatio nominis: The species is named after the type locality.

Measurements: Pronotum length 3.52 mm, pronotum lobe width 3.2 mm, pronotum height 0.93 mm, postfemur length 3.92 mm, postfemur width 1.26 mm, vertex width 0.48 mm, eye width 0.34 mm.

Description: Very flat and wingless species. Head not exerted above the pronotum. Fastigium not reaching the frontal margin of the eyes. Anterior border of the fastigium rounded. Vertex concave, broader than an eye. Transverse carinae obsolete. Lateral carinae shorter, curved inwards, not reaching the medial carina. In lateral view, lateral carinae visible above the eyes. Medial carina in the posterior part obsolete, initiated in line of the

supraocular lobes, arched and projected slightly before the eyes. Fossulae shallow. Frontal costa in lateral view visible before the whole eyes. Fascial carinae in lateral view slightly arched before the antenna. Scutellum in frontal view narrower, a little broader than an antennal groove. Furcation of the frontal costa short above the superior ocelli, a little above the lower margin of the eyes. Superior ocelli in line with the lower margin of the eyes. Eyes subcircular, not touching the anterior margin of the pronotum. Their dorsal margin not extending above the fastigium. Upper margin of the antennal grooves below the lower margin of the eyes. Pronotum flat, coarse with some short carinulae and tubercles. Median carina extending to the anterior border. Prozonal carinae parallel. Humeral angles and interhumeral carinae absent. Infrascapular area inclined, reaching the end of the pronotum. Internal lateral carinae absent. Lateral lobes of the paranota broadly rounded, strongly curved laterally. Pronotal process short, reaching the middle of the hind femora. Seen from above, broadly truncated posteriorly, slightly rounded on each side of the median carina and notched in the middle. Tegmen and hind wings absent. Anterior and middle femora flattened and inclined to the body. The dorsal margin undulating. The ventral margin with two lappets and some very short hairs. The second segment of the tarsus short. Hind femora slender (3.1x longer than wide), slightly inclined. The ventro-external carina curved laterally, with two lappets curved laterally. The ventral external area directed downwards, coloured black. Genuic teeth very small. Antegenic teeth small, a larger lappet on the dorsal margin of the hind femora in front of the antegenic teeth. Posttibia brown with two white bands. Last article of the tarsi a little longer than the first. First and second pulvilli short and acute. The third pulvilli long as the sum of the first and second. Colour brown with some lighter sections. In ventral view most body parts black.

Differential diagnosis: *Planotettix astrolabebayensis* is together with *Planotettix fartmanni* sp. nov. the only species of *Planotettix* gen. nov. where, in lateral and frontal view, lateral carinae visible above the eyes. It can be differentiated from *Planotettix fartmanni* by the absence of the spiny tubercles on the median carina.

Distribution: Only found in the Astrolabe Bay at the east cost of Papua New Guinea.



***Planotettix biroi* sp. nov.** (Plate 85 fig. 2, plate 86 fig. 3, plate 87 fig. 2)

Holotype ♀ BPBM, PAPUA NEW GUINEA: [Morobe Prov.], Finschhafen N. [6°36'S 147°51'E], leg. J. & M. Sedlacek.

Paratypes 3♀ (1/4-3/4) HNHM, PAPUA NEW GUINEA: [Morobe Prov.], Huon Golf, Sattelberg [6°29'S 147°46'E], 1899 (3/4 25.XI.1898), leg. Biró, 2/4 deposited in ZFMK, 3/4 deposited in NCB-RMNH; 1♀ larva (4/4) HNHM, PAPUA NEW GUINEA: [Morobe Prov.], Huon Golf, Sattelberg [6°29'S 147°46'E], 1899, leg. Biró.

Derivatio nominis: Patronymic. The species is named after collector Lajos Biró (1856-1931), a Hungarian naturalist.

Measurements, holotype ♀: Pronotum length 3.6 mm, pronotum lobe width 3.12 mm, pronotum height 1.38 mm, postfemur length 3.6 mm, postfemur width 1.35 mm, vertex width 0.58 mm, eye width 0.34 mm. Paratypes ♀♀: Pronotum length 3.6-3.92 mm, pronotum lobe width 3.2-3.36 mm, pronotum height 1.35-1.44 mm, postfemur length 4-4.24 mm, postfemur width 1.32-1.47 mm, vertex width 0.66-0.68 mm, eye width 0.34-0.38 mm.

Description, holotype ♀: Head not exerted above the pronotum. Fastigium not reaching the frontal margin of the eyes. Anterior border of the fastigium straight. Anterior half of the vertex a little lower than the posterior half. Fossulae deep. Vertex broader than an eye. Transverse carinae obsolete. Lateral carinae long, curved inwards, reaching the medial carina. In lateral view slightly visible above the eyes. Medial carina in the posterior part obsolete, initiated in line of the hind margin of the eyes, arched and projected slightly before the eyes. Frontal costa, in lateral view, visible before the whole eyes (in the paratypes not at all). Fascial carinae, in lateral view, slightly arched before the antenna. In frontal view the lateral carinae forming the scutellum parallel or slightly widened dorsad. Scutellum, in frontal view, a little broader than an antennal groove. Furcation of the frontal costa short above the superior ocelli, a little above the lower margin of the eyes. Superior ocelli in line with the lower margin of the eyes. Eyes subcircular, not touching the anterior margin of the pronotum. Their dorsal margin not extending above posterior part of the fastigium. Antennae short. Upper margin of the antennal grooves below the lower margin of the eyes. Pronotum flattened, coarse with some short carinulae and tubercles. Median carina extending to the anterior border. In lateral view the median carina with two elevations.

The higher one above the lateral lobes, the second one above the beginning of the hind femora. Prozonal carinae long and parallel. Infrascapular area slightly inclined, reaching the end of the pronotum. Internal lateral carinae absent. Lateral lobes of the paranota broadly rounded, strongly curved laterally and serrated. Pronotal process short, surpassing the middle of hind femora, seen from above, truncated posteriorly. The posterior margin spiny and notched in the middle. Tegmen and hind wings absent. Ventral margin of the anterior and middle femora with two lappets. The dorsal margin undulated and lamellate. The ventral margin of the middle femora with some short hairs. The second segment of the tarsus short. Hind femora moderately slender (2.7x longer than wide), slightly inclined. The ventro-external carina curved laterally, with two lappets in the middle. The dorsal external area with one distinct conical hump. The ventral external area directed downwards, coloured black. Genicular- and antegenicular teeth small and spiny. A small lappet on the dorsal margin of the hind femora in front of the antegenicular teeth. Posttibia brown with two white bands. Last article of the tarsi a little shorter than the first. Pulvilli short and acute. The third pulvilli shorter than the sum of the first and second. Colour brown with light areas and some black parts.

Differential diagnosis: The only species of *Planotettix* gen. nov. with two relatively high and arched elevations of the median carina.

Distribution: Only found at the east coast of Papua New Guinea in the region of Huon Gulf.

***Planotettix buergersi* sp. nov.** (Plate 85 fig. 3, plate 86 fig. 4, plate 87 fig. 3)

Holotype ♂ ZMHU, PAPUA NEW GUINEA: [East Sepik Prov.], Quellager [4°32'S 142°41'E], 13.-16.VIII.1912, leg. S. G. Bürgers.

Paratype 1♂ (1/1) BPBM, PAPUA NEW GUINEA: [East Sepik Prov.], Wewak [3°33'S 143°38'E], 2-20 m, 13.X.1957, leg. J. L. Gressitt, deposited in ZFMK.

Derivatio nominis: Patronymic. The species is named after the collector Dr. Bürgers. He was the doctor and zoologist of the German Kaiserin-Augusta-Fluß-Expedition (1912-1913) on the Sepik River.

Measurements, holotype ♂: Pronotum length 3.4 mm, pronotum lobe width 2.85 mm, pronotum height 1.06 mm, postfemur length 3.7 mm, postfemur width 1.3 mm, vertex width 0.46 mm, eye width 0.36 mm. Paratype ♂: Pronotum length 3.28 mm, pronotum lobe width 2.8 mm, pronotum



height 0.9 mm, postfemur length 3.52 mm, postfemur width 1.14 mm, vertex width 0.44 mm, eye width 0.36 mm.

Description, holotype ♂: Head not exerted above the pronotum, inclined under the pronotum. Fastigium not reaching the frontal margin of the eyes. Anterior border of the fastigium rounded. Anterior half of the vertex a little lower than the posterior half. Fossulae shallow. Vertex a little broader than an eye. Transverse carinae obsolete. Lateral carinae short, curved a little inwards, not reaching the medial carina. In lateral view not visible above the eyes. Medial carina in the posterior part obsolete, initiated in line of the supraocular lobes, arched and projected slightly before the eyes. Frontal costa, in lateral view, not arched before the eyes. Fascial carinae, in lateral view, slightly arched before the antenna. Scutellum in frontal view narrow, as broad as an antennal groove. Furcation of the frontal costa short above the superior ocelli, a little above the lower margin of the eyes. Superior ocelli in line with the lower margin of the eyes. Eyes subcircular, not touching the anterior margin of the pronotum. Their dorsal margin not extending above the posterior part of the fastigium. Upper margin of the antennal grooves a little below the lower margin of the eyes. Pronotum very flattened, coarse with some carinulae and impressed dots. Median carina extending to the anterior border. Prozonal carinae parallel. In lateral view the median carina with two low elevations of equal height, more undulated. Humeral angles and interhumeral carinae absent. Infrascapular area inclined, reaching the end of the pronotum. Internal lateral carinae absent. Lateral lobes of the paranota broadly rounded, strongly curved laterally. Pronotal process short, reaching the middle of the hind femora, seen from above, broadly truncated posteriorly slightly rounded on each side of the median carina and notched in the middle. Tegmen and hind wings absent. Anterior and middle femora flattened. The dorsal margin undulated and serrulate. The ventral margin with two lobes and some very short hairs. The second segment of the tarsus short. Hind femora slender (2.8x longer than wide). The ventro-external carina curved laterally, with two small lobes curved laterally. The ventral external area directed downwards, coloured black. Genicular- and antegenicular teeth very small and acute. A small acute lappet on the dorsal margin of the hind femora in front of the antegenicular teeth. Posttibia brown with two white bands. Last article of the tarsi as long as the first. Pulvilli small and acute. The third pulvilli as long as the sum of the first and second. In ventral view all

body parts black.

Differential diagnosis: There are no special characteristics for this species. With help of the identification key of *Planotettix* gen. nov. it is possible to identify this species. Both type-specimen are differentiated by the small lobes on the ventro-external carina. The lobes of the holotype are almost absent. Maybe with further research and comparison of both sexes it could be possible to answer the question, whether there are taxonomical differences.

Distribution: Found in the region of the Sepik River.

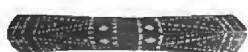
***Planotettix cyclopiensis* sp. nov.** (Plate 85 figs 4-5, plate 86 figs 5-6, plate 87 figs 4-5)

Holotype ♂ BPBM, WEST PAPUA: Cyclops Mts., Ifar [2°34'S 140°31'E], 450-500 m, 8.IX.1962, leg. J. Sedlacek.

Paratypes 1♀, 1♂ (1/10-2/10) BMNH, WEST PAPUA: Cyclops Mts., Sabron [2°30'S 140°25'E], 930 ft, IV.1936, leg. L. E. Cheesman; 1♀ (3/10), 1♂ (4/10) BMNH, WEST PAPUA: Cyclops Mts., Sabron [2°30'S 140°25'E], Camp 1, 930 ft, VI.1936, leg. L. E. Cheesman, 4/10 deposited in HNHM; 1♀ (5/10) BMNH, WEST PAPUA: Cyclops Mts., Sabron [2°30'S 140°25'E], Camp 1, 1200 ft, VII.1936, leg. L. E. Cheesman, deposited in UCDC; 1♀ (6/10) BMNH, WEST PAPUA: Cyclops Mts., 3500 ft, III.1936, leg. L. E. Cheesman, deposited in NCB-RMNH; 1♀ (7/10) BMNH, WEST PAPUA: Cyclops Mts., Mt. Cyclops, 4500 ft, III.1936, leg. L. E. Cheesman, deposited in IRSNB; 1♂ (8/10) BMNH, WEST PAPUA: Cyclops Mts., Mt. Cyclops, 3500 ft, III.1936, leg. L. E. Cheesman, deposited in ANIC; 2♂ (9/10-10/10) BMNH, WEST PAPUA: Cyclops Mts., Mt. Lina [2°30'S 140°30'E], 3500 ft, III.1936, leg. L. E. Cheesman, 9/10 deposited in NHRS, 10/10 deposited in ZMHU.

Derivatio nominis: The species is named after the type locality, the Cyclops Mountains.

Measurements, holotype ♂: Pronotum length 3.04 mm, pronotum lobe width 2.72 mm, pronotum height 0.96 mm, postfemur length 3.52 mm, postfemur width 1.2 mm, vertex width 0.42 mm, eye width 0.36 mm. Paratypes ♀♀: Pronotum length 3.12-3.5 mm, pronotum lobe width 2.8-3.15 mm, pronotum height 1-1.1 mm, postfemur length 3.4-3.6 mm, postfemur width 1.1-1.36 mm, vertex width 0.44-0.5 mm, eye width 0.3-0.4 mm. Paratypes ♂♂: Pronotum length 2.85-3.2 mm, pronotum lobe width 2.75-2.9 mm, pronotum height 0.9-1.1 mm, postfemur length 3.2-3.5 mm, postfemur width 1-1.15 mm, vertex width 0.44-0.48 mm, eye width 0.3-0.36 mm.



Description, holotype ♂: Head not exerted above the pronotum, strongly inclined under the pronotum. Fastigium not reaching the frontal margin of the eyes. Anterior border of the fastigium rounded. Anterior half of the vertex a little lower than the posterior half. Fossulae shallow. Vertex a little broader than an eye. Transverse carinae obsolete. Lateral carinae short, curved a little inwards, not reaching the medial carina. In lateral view not visible above the eyes. Medial carina in the posterior part obsolete, initiated in line of the posterior margin of the eyes, arched and projected slightly before the eyes. Frontal costa, in lateral view, not arched before the eyes. Fascial carinae in lateral view slightly arched before the antenna. Scutellum in frontal view narrower, a little broader than an antennal groove. Furcation of the frontal costa short above the superior ocelli, a little above the lower margin of the eyes. Superior ocelli in line with the lower margin of the eyes. Eyes subcircular, not touching the anterior margin of the pronotum. Their dorsal margin not extending above the posterior part of the fastigium. Upper margin of the antennal grooves below the lower margin of the eyes. Pronotum very flat, coarse with some short carinulae and tubercles. Median carina extending to the anterior border. Prozonal carinae parallel. In lateral view the median carina with two low elevations of equal height, more undulated. Humeral angles and interhumeral carinae absent. Infrascapular area inclined, reaching the end of the pronotum. Internal lateral carinae absent. Lateral lobes of the paranota broadly rounded, strongly curved laterally and truncated posteriorly. Pronotal process short, reaching the middle of the hind femora. Seen from above, broadly truncated posteriorly slightly rounded on each side of the median carina and notched in the middle. Tegmen and hind wings absent. Anterior and middle femora flat. The dorsal margin undulating. The ventral margin with two lobes and some very short hairs. The second segment of the tarsus short. Hind femora slender (2.9x longer than wide), inclined. The ventro-external carina curved laterally, with two serrulate lobes. The ventral external area directed downwards, coloured black. Genuic- and antegenicular teeth nearly absent. A medium sized lappet on the dorsal margin of the hind femora in front of the antegenicular teeth. Posttibia brown with one white bands. Last article of the tarsi as long as the first. Pulvilli obtuse. The third pulvilli shorter than the sum of the first and second. In ventral view all body parts black. The male are a little smaller.

Differential diagnosis: There are no special characteristics for this species. With the help of the identification key of *Planotettix* gen. nov. it is possible to identify this species.

Distribution: Found in the Cyclops Mountains.

***Planotettix fartmanni* sp. nov.** (Plate 85 figs 6-7, plate 86 figs 7-8, plate 87 figs 6-7)

Holotype ♀ UCDC, PAPUA NEW GUINEA: Morobe Prov., Tekadu, 7°38'S 146°34'E, I.2000, leg. T. A. Sears & binatang brigade (Malaise trap).

Paratypes 1♀ (1/6) UCDC, PAPUA NEW GUINEA: Gulf [Prov.], Ivimka Res. Station, Lakekamu Basin, 120 m, 7°44'S 146°30'E, 10.-12.II.2000, leg. T. A. Sears (Malaise trap), deposited in BMNH; 1♀ (2/6) UCDC, PAPUA NEW GUINEA: Gulf [Prov.], Ivimka Res. Station, Lakekamu Basin, 120 m, 7°44'S 146°30'E, 1.-7.III.2000, leg. T. A. Sears, deposited in NCB-RMNH; 1♂ (3/6) UCDC, PAPUA NEW GUINEA: Gulf [Prov.], Ivimka Res. Station, Lakekamu Basin, 120 m, 7°44'S 146°30'E, 19.-25.XI.2000, leg. T. A. Sears (Malaise trap), deposited in HHM; 1♂ (4/6) UCDC, PAPUA NEW GUINEA: Gulf [Prov.], Ivimka Res. Station, Lakekamu Basin, 120 m, 7°44'S 146°30'E, 24.IV.2000, leg. T. A. Sears, deposited in ZMHU; 2♂ (5/6-6/6) UCDC, PAPUA NEW GUINEA: Morobe Prov., Tekadu, 7°38'S 146°34'E, 1.-20.IV.2000, leg. T. A. Sears & binatang brigade (Malaise trap) (5/6 deposited in ZMFK, 6/6 in BPBM).

Derivatio nominis: Patronymic. The species is named after Dr. Thomas Fartmann, the chairman of the German Society for orthopterology.

Measurements, holotype ♀: Pronotum length 4.64 mm, pronotum lobe width 3.6 mm, pronotum height 2.04 mm, postfemur length 4.96 mm, postfemur width 1.74 mm, vertex width 0.9 mm, eye width 0.4 mm. Paratypes ♀♀: Pronotum length 4.96 mm, pronotum lobe width 3.84-3.92 mm, pronotum height 1.65-1.98 mm, postfemur length 5.12-5.36 mm, postfemur width 1.65-1.86 mm, vertex width 0.92-1 mm, eye width 0.4-0.44 mm. Paratypes ♂♂: Pronotum length 3.92-4.16 mm, pronotum lobe width 3.2-3.44 mm, pronotum height 1.47-1.86 mm, postfemur length 4.4-4.48 mm, postfemur width 1.47-1.62 mm, vertex width 0.78-0.82 mm, eye width 0.4-0.44 mm.

Description, holotype ♀: Flat and wingless species. Head not exerted above the pronotum. Fastigium not reaching the frontal margin of the eyes. Anterior border of the fastigium rounded. Anterior half of the vertex a little lower than the posterior half. Fossulae deep. Vertex broader than an eye. Transverse carinae obsolete. Lateral carinae long, curved inwards, reaching the medial carina.



In lateral view the lateral carinae slightly visible above the eyes. Medial carina in the posterior part obsolete, initiated in line of the supraocular lobes, not projected before the eyes. Frontal costa, in lateral view, not visible before the eyes. Fascial carinae, in lateral view, arched before the antenna. Scutellum in frontal view broader. Furcation of the frontal costa at the dorsal margin of the superior ocelli. Superior ocelli in line with the lower margin of the eyes. Eyes subcircular, not touching the anterior margin of the pronotum. Their dorsal margin not extending above the fastigium. Antennae short. Upper margin of the antennal grooves below the lower margin of the eyes. Pronotum flattened, coarse with some short carinulae and tubercles. Median carina extending to the anterior border. At the anterior border a small tubercle. In lateral view the median carina with two elevations. The higher one above the lateral lobes, the second one above the beginning of the hind femora. Median carina serrated and with tubercles. Prozonal carinae long and parallel. Humeral angles and interhumeral carinae absent. Infrascapular area inclined, reaching the end of the pronotum. Internal lateral carinae absent. Lateral lobes of the paranota broadly rounded, strongly curved laterally. Pronotal process short, surpassing the middle of hind femora, seen from above, truncated posteriorly. Tegmen and hind wings absent. Anterior and middle femora flattened. The dorsal and ventral margin undulating, the ventral margin with some short hairs. The second segment of the tarsus short. Hind femora moderately slender (2.8x longer than wide), slightly inclined. The ventro-external carina curved laterally, with one lappet in the middle. The ventral external area directed downwards, coloured black. Genicular- and antegenicular teeth small. A smaller lappet on the dorsal margin of the hind femora in front of the antegenicular teeth. Posttibia brown with two white bands. Last article of the tarsi a little longer than the first. First and second pulvilli short and obtuse. The third pulvilli long as the sum of the first and second. Colour brown with light areas and some black parts. The male are a little smaller.

Differential diagnosis: *Planotettix fartmanni* is the only species of *Planotettix* gen. nov. with, in lateral view, some spiny tubercles on the serrated median carina.

Distribution: Found in the Lakekamu River Basin.

***Planotettix karubakensis* sp. nov.** (Plate 85 fig. 8, plate 86 fig. 9, plate 87 fig. 8)

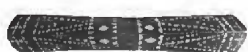
Holotype ♀ BPBM, WEST PAPUA: Swart Valley, Karubaka [3°36' S 138°28' E], 1400 m, 21.XI.1958, leg. J. L. Gressitt.

Paratype ♀ BPBM, WEST PAPUA: Swart Valley, Karubaka [3°36' S 138°28' E], 1400-1600 m, 9.XI.1958, leg. J. L. Gressitt (light trap), deposited in ZMFK.

Derivatio nominis: The species is named after the type locality.

Measurements, holotype ♀: Pronotum length 3.6 mm, pronotum lobe width 3 mm, pronotum height 1.25 mm, postfemur length 3.8 mm, postfemur width 1.44 mm, vertex width 0.68 mm, eye width 0.36 mm. Paratype ♀: Pronotum length 3.68 mm, pronotum lobe width 2.96 mm, pronotum height 1.14 mm, postfemur length 3.84 mm, postfemur width 1.44 mm, vertex width 0.66 mm, eye width 0.38 mm.

Description, holotype ♀: Head not exerted above the pronotum. Fastigium not reaching the frontal margin of the eyes. Anterior border of the fastigium straight. Anterior half of the vertex a little lower than the posterior half. Fossulae deep. Vertex broader than an eye. Transverse carinae obsolete. Lateral carinae short, curved inwards, not reaching the medial carina. In lateral view not visible above the eyes (paratype: slightly visible). Medial carina in the posterior part obsolete, initiated in line of the supraocular lobes, not projected before the eyes. Frontal costa, in lateral view, not visible before the eyes. Fascial carinae, in lateral view, arched before the antenna. Scutellum in frontal view broad. Furcation of the frontal costa very short above the superior ocelli, a little above the lower margin of the eyes. Superior ocelli in line with the lower margin of the eyes. Eyes subcircular, not touching the anterior margin of the pronotum. Their dorsal margin not extending above posterior part of the fastigium. Upper margin of the antennal grooves one diameter below the lower margin of the eyes. Pronotum flattened, covered with very densely impressed dots and short hairs. Median carina extending to the anterior border. In lateral view the median carina with one elevation above the lateral lobes, increasing at the middle of the prozonal area. Median carina smooth, slightly increasing to the posterior margin. Prozonal carinae long and parallel. Infrascapular area a little inclined, reaching the end of the pronotum. Internal lateral carinae absent. Lateral lobes of the paranota rounded and strongly curved laterally. Pronotal process short, surpassing the middle of hind femora, seen from above truncated posteriorly. The posterior margin notched in the middle. Tegmen and hind wings absent. Ventral margin of the anterior and middle femora with two lobes. The dorsal margin undulated. The ventral margin of the middle femora



with some short hairs. The second segment of the tarsus short. Hind femora moderately stout (2.6x longer than wide). The ventro-external carina curved laterally, without any lobes. The dorsal external area with one distinct conical hump. The median external area with one distinct lobe curved outwards. The ventral external area directed downwards, not distinctly coloured black. Genicular teeth small and acute, antegenicular teeth larger and serrated. The dorsal margin of the hind femora finely serrated without any lobes. Posttibia brown. Last article of the tarsi as long as the first. Pulvilli short and acute. The third pulvilli shorter than the sum of the first and second.

Differential diagnosis: The only species of *Planotettix* gen. nov. with one distinct conical hump on the dorsal external area but no further lobes on the outside of the hind femora.

Distribution: Only found in the Swart Valley in West Papua.

***Planotettix maai* sp. nov.** (Plate 85 figs 9-10, plate 86 figs 10-11, plate 87 figs 9-10)

Holotype ♀ BPBM, PAPUA NEW GUINEA: [East Sepik Prov.], Bainyik, S. of Maprik [3°40'S 143°03'E], 150 m, 12.I.1960, leg. T. C. Maa.

Paratype ♂ BPBM, WEST PAPUA: Japen I., SSE Sumberbaba [1°49'S 136°45'E], Dawai R., Jungle, 28.X.1962, leg. H. Holtmann (light trap), deposited in ZMFK.

Derivatio nominis: Patronymic. The species is named after its collector, Tsing-chao Maa.

Measurements, holotype ♀: Pronotum length 3.36 mm, pronotum lobe width 2.96 mm, pronotum height 1.26 mm, postfemur length 3.6 mm, postfemur width 1.35 mm, vertex width 0.58 mm, eye width 0.38 mm. Paratype ♂: Pronotum length 3.44 mm, pronotum lobe width 2.31 mm, pronotum height 1.15 mm, postfemur length 3 mm, postfemur width 1.1 mm, vertex width 0.48 mm, eye width 0.36 mm.

Description, holotype ♀: Very small and wingless species. Head not exerted above the pronotum. Fastigium not reaching the frontal margin of the eyes. Anterior border of the fastigium rounded. Anterior half of the vertex a little lower than the posterior half. Fossulae shallow. Vertex broader than an eye. Transverse carinae obsolete. Lateral carinae short, curved inwards, not reaching the medial carina. In lateral view, slightly visible above the eyes. Medial carina in the posterior part obsolete, initiated in line of the middle of the eyes, a little projected above the eyes. Frontal costa, in lateral view, not

visible before the whole eyes. Fascial carinae, in lateral view, arched before the antenna. In frontal view the lateral carinae forming the scutellum parallel. Scutellum in frontal view broader than an antennal groove. Furcation of the frontal costa short above the superior ocelli, a little above the lower margin of the eyes. Superior ocelli in line with the lower margin of the eyes. Eyes subcircular, not touching the anterior margin of the pronotum. Their dorsal margin not extending above posterior part of the fastigium. Antennae short. Upper margin of the antennal grooves below the lower margin of the eyes. Pronotum flattened, coarse with some short granulae and impressed dots. Median carina extending to the anterior border. In lateral view the median carina with two elevations. The higher one above the lateral lobes, the very low second one above the beginning of the hind femora. Humeral angles and interhumeral carinae distinct, but very inconspicuous. Prozonal carinae long and parallel. Infrascapular area a little inclined, reaching the end of the pronotum. In dorsal view the dorsal margin of the infrascapular area undulated. Internal lateral carinae absent. Lateral lobes of the paranota angular, strongly curved laterally. Pronotal process short, surpassing the middle of hind femora, seen from above truncated posteriorly. Tegmen and hind wings absent. Ventral and dorsal margin of the anterior and middle femora slightly undulated, without distinct lobes. The ventral margin of the middle femora with some short hairs. The second segment of the tarsus short. Hind femora moderately stout (2.6x longer than wide). The outside of the hind femora without any lobes. The dorsal external area with one distinct but low conical hump. The ventral external area directed downwards, coloured black. Genicular- and antegenicular teeth small and acute. The antegenicular teeth smaller than the Genicular teeth. Posttibia brown with one white band. Last article of the tarsi a little shorter than the first. Pulvilli short and acute. The third pulvilli shorter than the sum of the first and second.

Differential diagnosis: It seems to be possible that both type-specimen from two very distant places - one from mainland of New Guinea and one from the island of Yapen - represent two valid species. However, I am not able to differentiate both type specimens. May be with further research and comparison of both sexes it could be possible. *Planotettix maai* is not as flattened as the other *Planotettix*-species. The femora are not inclined. It is together with *Planotettix karubakensis* the only species of *Planotettix* gen. nov. with angular and not broadly rounded lobes but is differentiated from





this species by the absence of one distinct conical hump on the dorsal external area on the outside of the hind femora.

Distribution: Found on the island of Yapen and in the south of the Prince Alexander Mountains in the northwest of Papua New Guinea.

***Planotettix mountbaduriensis* sp. nov.** (Plate 85 fig. 11, plate 86 fig. 12, plate 87 fig. 11)

Holotype ♀ BMNH, WEST PAPUA: Japen, Seroi, Aiam Range, Mt. Baduri, Camp 1, 1000 ft., IX.1938, leg. L. E. Cheesman.

Derivatio nominis: The species is named after the type locality.

Measurements: Pronotum length 3.84 mm, pronotum lobe width 3.6 mm, pronotum height 0.9 mm, postfemur length 4.16 mm, postfemur width 1.35 mm, vertex width 0.48 mm, eye width 0.34 mm.

Description: Very flat and wingless species. Head not exerted above the pronotum, strongly inclined under the pronotum. Fastigium not reaching the frontal margin of the eyes. Anterior border of the fastigium rounded. Anterior half of the vertex a little lower than the posterior half, broader than an eye. Fossulae shallow. Transverse carinae obsolete. Lateral carinae short, curved a little inwards, not reaching the medial carina. In lateral view slightly visible above the eyes. Medial carina in the posterior part obsolete, initiated in line of the supraocular lobes, arched and projected slightly before the eyes. Frontal costa, in lateral view, arched before the upper half of the eye. Fascial carinae, in lateral view, slightly arched before the antenna. Scutellum in frontal view narrower, a little broader than an antennal groove. Furcation of the frontal costa short above the superior ocelli, a little above the lower margin of the eyes. Superior ocelli in line with the lower margin of the eyes. Eyes subcircular, not touching the anterior margin of the pronotum. Their dorsal margin not extending above posterior half of the fastigium. Upper margin of the antennal grooves below the lower margin of the eyes. Pronotum very flattened, coarse with some short carinulae and tubercles. Median carina extending to the anterior border. Prozonal carinae short and parallel. Humeral angles and interhumeral carinae absent. Infrascapular area inclined, reaching the end of the pronotum. Internal lateral carinae absent. Lateral lobes of the paranota broadly rounded, strongly curved laterally and truncated posteriorly. Pronotal process short, reaching the middle of the hind femora, seen from

above, broadly truncated posteriorly, concavely emarginated. The 8. tergite with a distinct tubercle on the posterior margin. Tegmen and hind wings absent. Anterior and middle femora flattened and inclined to the body. The dorsal margin undulating. The ventral margin with three lappets and some very short hairs. The second segment of the tarsus short. Hind femora slender (3.1x longer than wide), inclined and flattened. The ventro-external carina curved laterally, with two lappets curved laterally. The ventral external area directed downwards, coloured black. Genicular- and antegenicular teeth small and acute. The antegenicular teeth small. A medium sized lappet on the dorsal margin of the hind femora in front of the antegenicular teeth. Last article of the tarsi as long as the first. Pulvilli acute. Differential diagnosis: Very flat species with inclined femora and with three distinct broad lobes on the ventral margin of the anterior and middle femora. Only *Planotettix planus* has the same characteristics but the posterior margin of the pronotal process has, seen from above, only a small incision.

Distribution: Only found on the island of Yapen.

***Planotettix planus* sp. nov.** (Plate 85 fig. 12, plate 86 fig. 1, plate 87 fig. 12)

Holotype ♂ BPBM, PAPUA NEW GUINEA: [Western Prov.] Telefomin [4°08'S 141°35'E], 1700 m, 8.VIII.1963, leg. R. Straatman.

Derivatio nominis: The name refers to the extremely flattened species.

Measurements: Pronotum length 3.44 mm, pronotum lobe width 3.2 mm, pronotum height 0.9 mm, postfemur length 3.75 mm, postfemur width 1.2 mm, vertex width 0.48 mm, eye width 0.3 mm.

Description: Very small wingless species with an extremely flattened body and pronotum. Head not exerted above the pronotum, strongly inclined under the pronotum. Fastigium not reaching the frontal margin of the eyes. Anterior border of the fastigium rounded. Vertex concave, broader than an eye. Transverse carinae obsolete. Lateral carinae short, curved a little inwards, not reaching the medial carina. In lateral view, minimally visible above the eyes. Medial carina in the posterior part obsolete, initiated in line of the supraocular lobes, arched and projected slightly before the eyes. Frontal costa, in lateral view, arched before the upper half of the eye. Fascial carinae, in lateral view, slightly arched before the antenna. Scutellum in frontal view narrow, a little broader than an antennal groove. Furcation of the frontal costa



short above the superior ocelli, a little above the lower margin of the eyes. Superior ocelli in line with the lower margin of the eyes. Eyes subcircular, not touching the anterior margin of the pronotum. Their dorsal margin not extending above the fastigium. Upper margin of the antennal grooves below the lower margin of the eyes. Pronotum very flattened, coarse with some short carinulae and tubercles. Median carina extending to the anterior border. Prozonal carinae parallel or curved a little outwards towards the anterior border of the pronotum. In lateral view, the median carina undulated with two very low elevations. Humeral angles and interhumeral carinae absent. Infrascapular area inclined, reaching the end of the pronotum and with a black spot at the start. Internal lateral carinae absent. Lateral lobes of the paranota broadly rounded, strongly curved laterally. Pronotal process short, reaching the middle of the hind femora, seen from above broadly truncated posteriorly slightly rounded on each side of the median carina and notched in the middle. Tegmen and hind wings absent. Anterior and middle femora flattened and inclined to the body. The dorsal margin undulating. The ventral margin with three lappets and some very short hairs. The second segment of the tarsus short. Hind femora slender (3.1x longer than wide). Inclined and flattened. The ventro-external carina curved laterally, with two lappets curved laterally. The ventral external area directed downwards, coloured black. Genuic- and antegenicular teeth nearly absent. A medium sized lappet on the dorsal margin of the hind femora in front of the antegenicular teeth. Posttibia brown with two white bands. Last article of the tarsi as long as the first. Pulvilli obtuse. The third pulvilli shorter than the sum of the first and second. Colour from above light brown with some brownish spots. In ventral view all body parts black.

Differential diagnosis: Very flat species with inclined femora and with three distinct broad lobes on the ventral margin of the anterior and middle femora. Only *Planotettix mountbaduriensis* sp. nov. has the same characteristics but the posterior margin of the pronotal process is, seen from above, concave. *Planotettix planus* has a small incision.

Distribution: Only found on Telefomin mountain.

***Planotettix riedei* sp. nov.** (Plate 85 figs 13-14, plate 86 figs 13-14, plate 87 figs 13-14)

Holotype ♀ BPBM, PAPUA NEW GUINEA: [Western Highlands Prov.], Fly River, Kiunga [6°07'S 141°18'E], 35 m, VIII.1969, leg. J. & M. Sedlacek.

Paratypes 1♀ (1/4), 2♂ (2/4-3/4) BPBM, PAPUA

NEW GUINEA: [Western Highlands Prov.], Fly River, Kiunga [6°07'S 141°18'E], 35 m, VIII.1969, leg. J. & M. Sedlacek, thereof 1/4 in HMHN, 2/4 in BMNH, 3/4 in ZFMK; 1♀ (4/4) NCB-RMNH, WEST PAPUA: Boven-Digoelgebiet, 400 km ten N v. Merauke, 1926, leg. A. Kalthofen.

Derivatio nominis: Patronymic. The species is named after Dr. Klaus Riede, a famous German orthopterologist.

Measurements, holotype ♀: Pronotum length 4.56 mm, pronotum lobe width 3.68 mm, pronotum height 1.65 mm, postfemur length 5.1 mm, postfemur width 2.01 mm, vertex width 0.78 mm, eye width 0.5 mm. Paratypes ♀♀: Pronotum length 4.72-4.96 mm, pronotum lobe width 3.76-3.84 mm, pronotum height 1.47-1.68 mm, postfemur length 4.96-5.52 mm, postfemur width 1.77-1.86 mm, vertex width 0.8-0.86 mm, eye width 0.48-0.5 mm. Paratypes ♂♂: Pronotum length 4.08-4.16 mm, pronotum lobe width 3.28 mm, pronotum height 1.29-1.45 mm, postfemur length 4.56-4.64 mm, postfemur width 1.59-1.7 mm, vertex width 0.7-0.74 mm, eye width 0.4-0.42 mm.

Description, holotype ♀: Head not exerted above the pronotum. Fastigium not reaching the frontal margin of the eyes. Anterior border of the fastigium rounded. Anterior half of the vertex a little lower than the posterior half. Fossulae shallow. Vertex broader than an eye. Transverse carinae obsolete. Lateral carinae longer, curved inwards and a little backwards to the medial carina. In lateral view not visible above the eyes. Medial carina in the posterior part obsolete, initiated in line of the middle of the eyes. Not projected above the eyes. Frontal costa, in lateral view, not visible before the whole eyes. Fascial carinae, in lateral view, arched before the antenna. Scutellum, in frontal view, broader than an antennal groove. Furcation of the frontal costa short above the superior ocelli, a little above the lower margin of the eyes. Superior ocelli in line with the lower margin of the eyes. Eyes subcircular, touching the anterior margin of the pronotum. Their dorsal margin not extending above posterior part of the fastigium. Upper margin of the antennal grooves a little below the lower margin of the eyes. Pronotum flattened, smooth and finely granulated. Median carina extending to the anterior border. In lateral view the median carina with two low elevations of equal height, more undulated. Humeral angles and interhumeral carinae absent. Prozonal carinae long and parallel. Infrascapular area a little inclined, reaching the end of the pronotum. In dorsal view the dorsal margin of the infrascapular area undulated.



Internal lateral carinae inconspicuous, but visible. Lateral lobes of the paranota rounded, strongly curved laterally. Pronotal process short, reaching the middle of hind femora, seen from above, the posterior apex narrow and truncated. Tegmen and hind wings absent. Ventral and dorsal margin of the anterior and middle femora finely serrulate, slightly undulated. The ventral margin of the middle femora with some short hairs. The second segment of the tarsus short. Hind femora moderately stout (2.5x longer than wide). The outside of the hind femora without any lobes. The dorsal external area with one inconspicuously low rounded hump. The ventral external area directed downwards, but not as strongly as in other *Planotettix*-species. Lower side coloured black. Genuic- and antegenicular teeth small and acute, without lappets on the

dorsal margin of the hind femora in front of the antegenicular teeth. Posttibia brown with one white band. Last article of the tarsi a little shorter than the first. Pulvilli short and obtuse. The third pulvilli shorter than the sum of the first and second.

Differential diagnosis: *Planotettix riedei* is together with *Planotettix maai* the only species of *Planotettix* gen. nov. without lappet or lobe on the dorsal margin of the hind femora in front of the antegenicular teeth. From *Planotettix maai* sp. nov. it is differentiated by the broadly rounded lateral lobes and, in lateral view, the flat and undulated median carina without an arched elevation in the anterior part.

Distribution: Found in the south of New Guinea in the upper Fly River and upper Digul River

### Key to species of *Planotettix* gen. nov.

- 1 Lamellate medial carina, in lateral view, visible in front of the eyes ..... 4
- Medial carina, in lateral view, not visible in front of the eyes or in line with the eyes ..... 2
- 2 Dorsal margin of the antennal grooves nearly in line with the lower margin of the eyes . *Planotettix riedei* sp. nov.
- Dorsal margin of the antennal grooves at least 1 diameter deeper than the lower margin of the eyes ..... 3
- 3 Median carina smooth ..... *Planotettix karubakensis* sp. nov.
- Median carina serrated ..... *Planotettix fartmanni* sp. nov.
- 4 Lateral lobes in dorsal view broadly rounded. Hind femora with lobes on the ventro-external carinae ..... 5
- Lateral lobes in dorsal view angular. Hind femora without lobes on the ventro-external carinae .....  
..... *Planotettix maai* sp. nov.
- 5 Pronotum, in lateral view, flattened or slightly undulated ..... 6
- Pronotum, in lateral view, with two distinct elevations ..... *Planotettix biroi* sp. nov.
- 6 Tergite 8 dorsal without a tubercle in the middle of the hind margin ..... 7
- Tergite 8 dorsal with a small distinct tubercle in the middle of the hind margin. Yapen Island .....  
..... *Planotettix mountbaduriensis* sp. nov.
- 7 Lateral carinae not visible above the eyes ..... 8
- Lateral carinae, in lateral view, visible above the eyes ..... *Planotettix astrolabebayensis* sp. nov.
- 8 Hind femora with large lobes on the on the ventro-external carinae; ventral margin of the anterior and middle femora with three distinct lobes ..... *Planotettix planus* sp. nov.
- Hind femora with small lobes on the on the ventro-external carinae; ventral margin of the anterior and middle femora with two distinct lobes ..... 9
- 9 The integument is sparsely setose ..... *Planotettix buergersi* sp. nov.
- The integument is densely setose ..... *Planotettix cycloperensis* sp. nov.

### **Potua Bolívar, 1887**

Type species: *Potua coronata* Bolívar, 1887.

Distribution: India, Borneo and Sumatra.

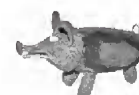
Note: This genus is in need of revision.

### **Potua aptera Wagan, Kevan, 1992**

Holotype ♀ LEMQ, INDIA: Anaimalai Hills, Kadam Dari, 3500 ft, V.1963, leg. P. S. Nathan.

Differential diagnosis: After studying the drawings of the Holotype in the publication of Wagan & Kevan (1992), I am certain that this species does not belong to *Potua*. It possibly belongs to *Deltonotus* but further examinations are necessary to determine the correct allocation.

Distribution: Only found at Kadam Darin in India.



***Potua coronata coronata* Bolívar, 1887** (Plate 88  
figs 1-3)

Syntype ♂ NHRS, MALAYSIA: Malacca, leg. Staudinger.  
Syntype ♂ NMW, MALAYSIA: Borneo, Sarawak.  
Additional material: 5♀, 4♂ NHRS, MALAYSIA: O.  
Borneo, Pajau River, leg. Mjöberg.

Distribution: Only found on Borneo.

***Potua coronata sumatrensis* Bolívar, 1898** (Plate  
88 figs 4-6)

Type ♂ MSNG, INDONESIA: Sumatra, Si-Rambé,  
XII.1890-III.1891, leg. E. Modigliani.  
Additional material: 1♀ SMTD, INDONESIA:  
Sumatra, Wai Lima Z. Sum. Lampongs, XI-XII.1921,  
leg. Karny & Siebers; 1♀ SMTD, INDONESIA: Sumatra,  
Soekaranda, leg. Dohrn; 1♀ MNSL, INDONESIA: Sumatra,  
Naturreservat Harau 90 km von Padang Panjang (West-  
Sumatra), 1991, leg. Bujang.

Distribution: Only found on Sumatra.

***Potua morbillosa* (Walker, 1871)**

Holotype ♂ BMNH, MALAYSIA: Borneo, Sarawak.

Distribution: Only found on Borneo.

***Potua sabulosa* Hancock, 1915** (Plate 88 figs 7-9)

Holotype ♂ ANSP, INDIA: [Bombay Pres.], Satara dist.,  
Yenna Valley, Medina, 2500-3500 ft, 17.-23.IV.1912,  
leg. F. H. Gravely.

Distribution: Only found at Medina in India.

Note: After studying images of the holotype, I am  
certain that this species belongs to *Potua* Bolívar,  
1887.

***Pseudohyboella* Günther, 1938**

Type species: *Pseudohyboella weylandiana*  
Günther, 1938.

Distribution: This genus is only found in the  
southwest of West Papua.

***Pseudohyboella weylandiana* Günther, 1938**  
(Plate 88 figs 10-12)

Holotype ♀ ZMHU, WEST PAPUA: Weyland-Gebirge,  
1500 m, 1931, leg. G. Stein.

Additional material: WEST PAPUA: 2♂ NCB-RMNH,  
Neu Guinea; 1♀, 1♀ larva BPBM, Vogelkop, Bomberi,  
700-900m, 10.VI.1959, leg. T. C. Maa; 1♂ BPBM,  
Vogelkop, Bomberi, 700-900m, 9.VI.1959, leg. J. L.  
Gressitt; 1♂ BPBM, S. Geelvink Bay, Nabire (Light Trap)  
[3°22'S 135°28'E], 14.IX.1962, leg. H. Holtmann; 1♂  
BPBM, S. Geelvink Bay, Nabire [3°22'S 135°28'E], 2.-9.

VII.1962, leg. J. L. Gressitt; 1♂ BPBM, Vogelkop, Kebar  
Val[ley]., W[est]. of Manokwari, 550m, 4.-31.I.1962,  
leg. L. W. Quate; 1♀ CDT: Raja Ampat, Misool Island  
(central), River Gam upstream, Gamta vill. 12-14 km NW,  
01°57'50''S 130°11'09''E, 70-350 m, 4.-6.II.2012,  
primeval lowland rainforest on limestone, leg. D. Telnov.

Measurements, holotype ♀: Pronotum length  
9.62 mm, pronotum lobe width 5.59 mm, pronotum  
height 3.2 mm, postfemur length 7.54 mm,  
postfemur width 3.25 mm, vertex width 1.28 mm,  
eye width 0.6 mm. ♀♀: Pronotum length 8.97-9.23  
mm, pronotum lobe width 5.07-5.46 mm, pronotum  
height 3-3.1 mm, postfemur length 6.63-7.15 mm,  
postfemur width 2.6-3.25 mm, vertex width 1.26  
mm, eye width 0.58-0.6 mm. ♂♂: Pronotum length  
8.32-8.71 mm, pronotum lobe width 4.94-4.95  
mm, pronotum height 2.75-2.95 mm, postfemur  
length 6.24-6.5 mm, postfemur width 2.9-3 mm,  
vertex width 1-1.22 mm, eye width 0.56-0.58 mm.  
One very small ♂ with all typical characteristics  
of this species has the following measurements:  
pronotum length 6 mm, pronotum lobe width 4  
mm, pronotum height 2.25 mm, postfemur length  
5.36 mm, postfemur width 2.15 mm, vertex width  
1.08 mm, eye width 0.42 mm.

Distribution: Found in the west of West Papua  
and on Misool.

***Stegaceps* Hancock, 1913**

Type species: *Stegaceps brevicornis* Hancock,  
1913.

Distribution: This genus is only found on Borneo.

***Stegaceps brevicornis* Hancock, 1913** (Plate 88  
figs 13-15)

Holotype ♀ ANSP, MALAYSIA: Borneo, Kabong,  
Kuching, VI.1900.

Differential diagnosis: Günther (1938a)  
supposed it might be the micropterous form of  
*Boczkittix borneensis* (Günther, 1935) (originally  
described as *Dolatettix*). With no doubts, this  
specimen belongs to the Cladonotinae, because  
the scutellum is clearly widened. Together with  
*Paraphyllum antennatum* Hancock, 1913 it is  
the only known South-East-Asian specimen of  
Cladonotinae with tegmen and long hind wings.  
*Stegaceps brevicornis* is macropronotal and  
brachypter. There are some obvious differences  
to *Boczkittix borneensis* (Günther, 1935): the  
antennae are shorter, the lateral lobes are rounded  
and curved downwards not contiguous to the body.  
In lateral view, only the apex of the fastigium and



not the whole frontal costa is visible in before the eyes.

Note: This is a valid species and not the micropterous form of *Boczkittix borneensis* (Günther, 1935).

**Tepperotettix Rehn, 1952**

Type species: *Tepperotettix reliquia* Rehn, 1952.

Distribution: This genus is only found in Australia.

**Tepperotettix reliquia Rehn, 1952** (Plate 89 figs 1-6)

Holotype ♀ MCZ, AUSTRALIA: Queensland, McPherson Range, National Park, 3000-4000 ft, 11.III.1932, leg. P. J. Darlington.

Additional material: 1♂ MHNG, AUSTRALIA: Queensland, McPherson Range, Lamington National Park, Mt. Merino (28°15'S 153°12'E), 1050-1100 m, 6.I.1992, leg. D. Burckhardt; 1♀ AMS, AUSTRALIA: Queensland, Tamborine Mt., 20.XII.1961, leg. McAlpine & Lossin.

Measurements ♂ MHNG: Pronotum length 5.36 mm, pronotum lobe width 3.36 mm, pronotum height 1.4 mm, postfemur length 4.5 mm, postfemur width 1.5 mm, vertex width 0.76 mm, eye width 0.38 mm. ♀, AMS: Pronotum length 6.08 mm, pronotum lobe width 3.92 mm, pronotum height 1.2 mm, postfemur length 5.1 mm, postfemur width 1.9 mm, vertex width 0.78 mm, eye width 0.5 mm.

**Tondanotettix Willemse, 1928**

Type species: *Tondanotettix brevis* (Haan, 1842).

Differential diagnosis: According to the description of *Devriesetettix* gen. nov. (type species *Devriesetettix dorreus* (Hancock, 1909), formerly *Tondanotettix dorreus*), there are now two species of *Tondanotettix* Willemse, 1928: *Tondanotettix modestus* Günther, 1937 and *Tondanotettix brevis* (Haan, 1842).

Distribution: This genus is only found on Sulawesi.

**Tondanotettix brevis brevis (Haan, 1842)** (Plate 89 figs 7-9)

Holotype ♀ NCB-RMNH, INDONESIA: [Sulawesi], Tondano.

Measurements: Pronotum length 10.01 mm, pronotum lobe width 5.2 mm, pronotum height 3.11 mm, postfemur length 6.37 mm, postfemur width 2.99 mm, vertex width 1.16 mm, eye width 0.64 mm (I examined the holotype).

Differential diagnosis: The species differs

from *Tondanotettix modestus* Günther, 1937 by the humps of the pronotum. *Tondanotettix modestus* Günther, 1937 has flattened pronotum.

**Tondanotettix brevis meridionalis Günther, 1937**

Lectotype ♀ MZPW (Museum Stettin), INDONESIA: [Sulawesi], Südcelebes, Lompo Batang, 1000 m, III.1896, leg. Fruhstorfer.

Paralectotype ♂ MZPW (Museum Stettin), INDONESIA: [Sulawesi], Südcelebes, Bonthain, III.1896, leg. Fruhstorfer.

It appears questionable whether the split into two subspecies is correct. Günther (1937) have not reviewed the holotype from Leiden (NCB-RMNH) and postulated the subspecies with a male and a female from South Celebes as syntypes. It is not clear whether the types in fact still exist. On account of the two existing drawings of the female by Günther, I postulate the female as a lectotype and the male as paralectotype. The subspecies differs therefore, and according to the descriptions of Günther, from the holotype of *Tondanotettix brevis brevis* only by the slightly elevated hump on the pronotum. This characteristic could also be part of the variability of the nominate subspecies. Further research and a diagnosis of the types from Stettin would be necessary for a final decision.

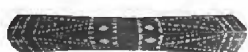
**Willemsetettix gen. nov.**

Type species: *Willemsetettix willemsei* sp. nov.

Derivatio nominis: Patronymic. The genus is named after the famous orthopterologist and very helpful friend Fer Willemse (1927-2009).

Description: The micropronotal and wingless specimens are very small. The head is not exerted. The lamellate medial carina is characteristic for this genus: beginning in line with the supraocular lobes and, in lateral, view strongly elevated above and before the eyes. The upper margin of the antennal grooves is slightly higher than the lower margin of the eyes. The scutellum is relatively broad. In lateral view the pronotum is arched in the anterior half and straight in the posterior half. The apex of the pronotum is broadly obtuse.

Differential diagnosis: The fastigium looks similar to *Boczkittix* gen. nov. and *Ingrischitettix* gen. nov. But the pronotum appears to be different. In *Boczkittix* gen. nov. and *Ingrischitettix* gen. nov. it is arcuated over its entire length. In frontal view *Ingrischitettix* gen. nov. is clearly distinct from *Willemsetettix* gen. nov. by the relatively narrow scutellum, the continuous frontal costa and the u-shaped transverse carinae.



Distribution: Endemic on New Guinea.

***Willemsetettix laeensis* sp. nov.** (Plate 90 figs 1, 7, plate 91 fig 1)

Holotype ♀ BPBM, PAPUA NEW GUINEA: [Morobe Prov.], Lae, Bubia Agric. Sta., 15 m, 6.VII.1957, leg. D. Elmo Hardy.

Derivatio nominis: The species is named after the type locality, the city of Lae.

Measurements: Pronotum length 6.56 mm, pronotum lobe width 3.36 mm, pronotum height 2.75 mm, postfemur length 4.5 mm, postfemur width 2 mm, vertex width 0.84 mm, eye width 0.42 mm.

Description: Head lower than the pronotum. Fastigium projecting before and above the eyes. Anterior border, in dorsal view, on a level with the eyes, slightly triangularly projected to the frontal costa. Vertex broader than an eye. Transverse carinae obsolete. Lateral carinae short and curved inwards, lamellar and, in lateral view, visible above the eyes. Medial carina beginning in line with the supraocular lobes, strongly elevated above and before the eyes. Fascial carinae, in lateral view, arched and projected before the antenna. Scutellum much broader than an antennal groove. Superior ocelli in line with the lower third of the eyes. Eyes subcircular, their dorsal margin lower than the fastigium. Eyes touching the anterior margin of the pronotum. Upper margin of the antennal grooves slightly in excess of the lower margin of the eyes. Antennae with 14 segments. Pronotum, in frontal view, tectiform, rugose with some short carinulae and tubercles. Pronotum, in lateral view, arched, increasing in the anterior third and descending to the posterior apex. The anterior apex of the pronotum extending over the head to the middle of the eyes. Median carina extending to the anterior border. Prozonal carinae long and straight but difficult to see. Interhumeral carinae very short. Infrascapular area relatively broad, reaching the apex of the pronotum. Internal lateral carinae absent. Lateral lobes, in dorsal view, rounded and curved laterally. Pronotal process surpassing the middle of hind femora. Posterior margin of the pronotal process, seen from above, broad and straight. Tegmen and wings absent. Anterior and middle femora relatively slender, the dorsal margin slightly undulating. Anterior femora ventral with one small lobe. Middle femora dorsal with some very short hairs. Second segment of the tarsus short. Hind femora rather stout (2.2x longer than wide). Hind tibia with two light bands. Genicular- and

antegenicular teeth small and acute. First article of the tarsi a little longer than the last. Pulvilli acute, the third pulvilli shorter than the sum of the first and second.

Differential diagnosis: in this species the prozonal carinae are slightly obsolete and the anterior apex of the pronotum is extending over the head to the middle of the eyes.

Distribution: Only found at the type locality near Lae in the west of New Guinea.

***Willemsetettix missai* sp. nov.** (Plate 90 figs 2-3, 8-9, plate 91 figs 2-3)

Holotype ♀ IRSNB, PAPUA NEW GUINEA: [Madang Prov.], Baiteta Bacs Blancs A1, 6.VII.1995, leg. Olivier Missa, Canopy Mission.

Paratypes 1♂ (1/5) IRSNB, PAPUA NEW GUINEA: [Madang Prov.], Baiteta Bacs Blancs M2 [5°01'S 145°45'E], 23.VI.1995, leg. Olivier Missa, Canopy Mission; 1♀ (2/5) IRSNB, PAPUA NEW GUINEA: [Madang Prov.], Baiteta Bacs Blancs M2 [5°01'S 145°45'E], 19.V.1995, leg. Olivier Missa, Canopy Mission, deposited in ZFMK; 1♀ (3/5) IRSNB, PAPUA NEW GUINEA: [Madang Prov.], Baiteta Bacs Blancs XG [5°01'S 145°45'E], 23.VI.1995, leg. Olivier Missa, Canopy Mission, deposited in NCB-RMNH; 1♀ (4/5) IRSNB, PAPUA NEW GUINEA: [Madang Prov.], Baiteta Bacs Blancs AR3 [5°01'S 145°45'E], 6.VII.1995, leg. Olivier Missa, Canopy Mission, deposited in BMNH; 1♂ (5/5) BPBM, PAPUA NEW GUINEA: [Madang Prov.], Madang (Alpinia) [5°13'S 145°48'E], 5 m, 28.X.1958, leg. J. L. Gressitt.

Derivatio nominis: Patronymic. The species is named after the collector Olivier Missa.

Measurements, holotype ♀: Pronotum length 4.9 mm, pronotum lobe width 3.05 mm, pronotum height 2.05 mm, postfemur length 3.75 mm, postfemur width 1.65 mm, vertex width 0.68 mm, eye width 0.33 mm. Paratypes ♀♀: Pronotum length 4.65-4.9 mm, pronotum lobe width 3.0-3.1 mm, pronotum height 1.85-2.1 mm, postfemur length 3.9 mm, postfemur width 1.66-1.7 mm, vertex width 0.74-0.78 mm, eye width 0.35-0.37 mm. Paratypes ♂♂: Pronotum length 4.1-4.25 mm, pronotum lobe width 2.7-2.9 mm, pronotum height 1.75 mm, postfemur length 3.4-3.55 mm, postfemur width 1.52-1.6 mm, vertex width 0.64-0.68 mm, eye width 0.35-0.36 mm.

Description, holotype ♀: Head lower than the pronotum. Fastigium projecting before and above the eyes. Anterior border, in dorsal view, on a level with the eyes, slightly triangularly projected to the frontal costa. Vertex broader than an eye. Transverse carinae obsolete. Lateral carinae short



and curved inwards, lamellar and, in lateral view, visible above the eyes. Medial carina beginning in line with the supraocular lobes, strongly elevated and broadly arched above and before the eyes. Fascial carinae, in lateral view, slightly projected before the antenna. Scutellum much broader than an antennal groove. Superior ocelli in line with the lower third of the eyes. Eyes subcircular, their dorsal margin lower than the fastigium. Eyes touching the anterior margin of the pronotum. Upper margin of the antennal grooves slightly in excess of the lower margin of the eyes. Antennae with 13 segments. Pronotum, in frontal view tectiform, rugose with some short carinulae and tubercles. Pronotum, in lateral view, arched, increasing in the anterior third and descending to the posterior apex. The anterior apex of the pronotum straight, only the tip of the median carina a little projected. Median carina extending to the anterior border. Prozonal carinae a little elevated curved inwards towards the anterior border. Interhumeral carinae absent. Infrascapular area broad, reaching the apex of the pronotum. Internal lateral carinae absent. Lateral lobes, in dorsal view, broadly rounded. Pronotal process surpassing the middle of hind femora. Posterior margin of the pronotal process, seen from above, broad, slightly concave. Tegmen and wings absent. Dorsal margin of the anterior and middle slightly undulating. Middle femora dorsal with some very short hairs. Second segment of the tarsus short. Hind femora stout (2.3x longer than wide). Hind tibia with two light bands. Genuic- and antegenuic teeth small and acute. First article of the tarsi a little longer than the last. Pulvilli obtuse, the third pulvilli shorter than the sum of the first and second. Differential diagnosis: In this species the medial carina, in lateral view, is relatively highly elevated above the eyes.

Distribution: Only found in the area of Madang.

***Willemsetettix oriomoensis* sp. nov.** (Plate 90 figs 4, 10, plate 91 fig. 4)

Holotype ♂ BPBM, PAPUA NEW GUINEA: [Western Prov.], Oriomo Govt. Sta. [8°52'S 143°11'E], 26.-28.X.1960, leg. J. L. Gressitt.

Derivatio nominis: The species is named after the type locality.

Measurements: Pronotum length 5.4 mm, pronotum lobe width 2.9 mm, pronotum height 2 mm, postfemur length 3.25 mm, postfemur width 1.65 mm, vertex width 0.76 mm, eye width 0.36 mm.

Description: Head lower than the pronotum.

Fastigium projecting before and above the eyes. Anterior border, in dorsal view, on a level with the eyes. Vertex broader than an eye. Transverse carinae obsolete. Lateral carinae very short and curved inwards. In lateral view, visible above the eyes. Medial carina beginning in line with the supraocular lobes, strongly elevated and broadly arched above and before the eyes. Fascial carinae, in lateral view, slightly projected before the antenna. Scutellum much broader than an antennal groove. Superior ocelli in line with the lower third of the eyes. Eyes subcircular, their dorsal margin lower than the fastigium. Eyes touching the anterior margin of the pronotum. Upper margin of the antennal grooves slightly in excess of the lower margin of the eyes. Antennae with 13 segments. Pronotum, in frontal view lower tectiform, rugose with some short carinulae and tubercles. Pronotum, in lateral view, arched, increasing in the anterior third and descending to a concave part above the beginning of the hind femora. The posterior part of the pronotum flat. The anterior apex of the pronotum straight. Median carina extending to the anterior border. Prozonal carinae elevated, curved inwards towards the anterior border. Interhumeral carinae distinct. Infrascapular area broad, reaching the apex of the pronotum. Internal lateral carinae absent. Lateral lobes, in dorsal view, broadly rounded. Pronotal process reaching the anterior margin of the knees. Posterior margin of the pronotal process, seen from above, broad and straight. Tegmen and wings absent. Dorsal margin of the anterior and middle slightly undulating. Middle femora dorsal with some very short hairs. Second segment of the tarsus short. Hind femora rather stout (2x longer than wide). Hind tibia with two light bands. Genuic- and antegenuic teeth small and acute. First article of the tarsi longer than the last. Pulvilli spinose, the third pulvilli shorter than the sum of the first and second.

Differential diagnosis: The anterior half of the pronotum is lower arched and the posterior half flattened with a concave passage between the halves. In *Willemsetettix willemsei* the anterior part is relatively higher. In other species of *Willemsetettix* gen. nov. the median carina descending to the posterior apex of the pronotum.

Distribution: Only found at the type locality.

***Willemsetettix wauensis* sp. nov.** (Plate 90 figs 5, 11, plate 91 fig. 5)

Holotype ♀ BPBM, PAPUA NEW GUINEA: [Morobe Prov.], Wau, 1200 m, 15.-22.XI.1961, leg. J. Sedlacek (Coll. Bishop)



Paratypes 1♀ (1/4) BPBM, [Morobe Prov.], Wau, 1300m, 10.IX.1961, leg. J. Sedlacek, deposited in NCB-RMNH; 1♀ (2/4) BPBM, [Morobe Prov.], Wau, 1050m, 10.IX.1961, leg. J. & M. Sedlacek, deposited in BMNH; 1♀ (3/4) BPBM, [Morobe Prov.], Wau, 1200-1500 m, 30.VIII.1965, leg. J. Sedlacek, deposited in IRSNB; 1♀ (4/4) BPBM, [Morobe Prov.], Wau, 1200-1300 m, 14.IX.1965, leg. J. Sedlacek, deposited in ZFMK.

Derivatio nominis: The species is named after the type locality, the city of Wau.

Measurements, holotype ♀: Pronotum length 5.76 mm, pronotum lobe width 3.6 mm, pronotum height 2.5 mm, postfemur length 5.04 mm, postfemur width 2.2 mm, vertex width 1 mm, eye width 0.5 mm. Paratypes ♀♀: Pronotum length 5.44-5.76 mm, pronotum lobe width 3.52-3.68 mm, pronotum height 2.5-2.7 mm, postfemur length 5.12-5.28 mm, postfemur width 2.15-2.25 mm, vertex width 1-1.06 mm, eye width 0.46-0.5 mm.

Description, holotype ♀: Head lower than the pronotum. Fastigium projecting before and above the eyes. Anterior border, in dorsal view, projected triangularly before the eyes. Vertex 2x broader than an eye. Transverse carinae obsolete. Lateral carinae short and curved inwards, in lateral view, visible above the eyes. Medial carina beginning in line with the supraocular lobes, a little elevated and broadly arched above and before the eyes. Fascial carinae, in lateral view, slightly projected before the antenna. Scutellum much broader than an antennal groove. Superior ocelli in line with the lower third of the eyes. Eyes subcircular, their dorsal margin lower than the fastigium. Eyes not touching the anterior margin of the pronotum. Upper margin of the antennal grooves slightly in excess of the lower margin of the eyes. Pronotum, in frontal view relatively low but tectiform, rugose with some short carinulae and tubercles. Pronotum, in lateral view, slightly arched, increasing in the anterior third and descending to the posterior apex. Median carina extending to the anterior border. Prozonal carinae long and straight. Interhumeral carinae distinct. Infrascapular area broad, reaching the apex of the pronotum. Internal lateral carinae absent. Lateral lobes, in dorsal view, broadly rounded. Pronotal process surpassing the middle of hind femora. Posterior margin of the pronotal process, seen from above, broad and slightly convex. Tegmen and wings absent. Dorsal margin of the anterior and middle femora straight. Middle femora dorsal with some very short hairs. Second segment of the tarsus short. Hind femora stout (2.3x longer than wide).

Hind tibia with two light bands. Genicular- and antegenicular teeth small and acute. First article of the tarsi longer than the last. Pulvilli acute, the third pulvilli shorter than the sum of the first and second. Differential diagnosis: The anterior border of the fastigium projecting considerably before the eyes. Even the lateral carinae, in dorsal view, projecting before the anterior margin of the eyes. It is the only species of *Willemsetettix* gen. nov. with this characteristics.

Distribution: Only found in the area of Wau.

***Willemsetettix willemsei* sp. nov.** (Plate 90 figs 6, 12, plate 91 fig. 6)

Holotype ♂ BPBM, WEST PAPUA: Genjam, 40 km W of Hollandia [2°46'S 140°12'E], 100-200 m, 1.-10. III.1960, leg. T. C. Maa.

Paratype ♂ (1/1) BMNH, WEST PAPUA: Cyclops Mts., Sabron [2°30'S 140°25'E], 930 ft, IV.1936, leg. L. E. Cheesman.

Derivatio nominis: Patronymic. The species is named after my good friend Luc Willemse, like his father a famous orthopterologist.

Measurements, holotype ♂: Pronotum length 3.6 mm, pronotum lobe width 2.6 mm, pronotum height 1.9 mm, postfemur length 3 mm, postfemur width 1.35 mm, vertex width 0.66 mm, eye width 0.32 mm. Paratype ♂: Pronotum length 3.95 mm, pronotum lobe width 2.9 mm, pronotum height 1.9 mm, postfemur length 3 mm, postfemur width 1.45 mm, vertex width 0.6 mm, eye width 0.4 mm.

Description: Rather small micropronotal species. Head lower than the fastigium and pronotum. Fastigium projecting before and above the eyes, in lateral view, square. Anterior border in dorsal view on a level with the eyes. Vertex slightly convex with a concave part near the eyes, 2x broader than an eye. Transverse carinae obsolete. Lateral carinae short and curved inwards, lamellar and, in lateral view, visible above the eyes. Medial carina beginning in line with the supraocular lobes, strongly elevated above and before the eyes. Frontal costa obsolete. Fascial carinae, in lateral view, strongly arched and projected before the antenna. Furcation of the frontal costa obsolete. The two fascial carinae begin in line with the superior ocelli. Scutellum much broader than an antennal groove. Superior ocelli in line with the lower third of the eyes. Eyes subcircular, their dorsal margin lower than the fastigium. Eyes almost touching the anterior margin of the pronotum. Upper margin of the antennal grooves slightly in excess of the lower margin of the eyes. Antennae with 13 segments. Pronotum





in the anterior half tectiform and in the posterior half flattened. Pronotum coarse, anterior border straight. Median carina arched in the posterior half and extending to the anterior border. Prozonal carinae little elevated and curved outwards towards the anterior border. Interhumeral carinae distinct. Infrascapular area relatively broad with a concave part posteriorly, reaching the apex of the pronotum. Internal lateral carinae absent. Lateral lobes curved laterally, broadly rounded. Pronotal process, seen from above, obtuse, slightly emarginated to the middle. Tegmen and wings absent. Anterior and middle femora relatively broad, the dorsal margin undulating. Middle femora dorsal without hairs. Second segment of the tarsus short. Hind femora rather stout (2.2x longer than wide). Dorso- and ventro-external carina without projections. Hind

tibia in the lower half bright and with a light band in the upper half. Genuic- and antegenicular teeth medium sized, acute. First article of the tarsi a little longer than the last. Pulvilli short and acute. The third pulvilli shorter than the sum of the first and second.

Differential diagnosis: *Willemsetettix willemsei* is the smallest species in its genus. Only in this species is the frontal costa between medial carina and fascial carinae obsolete and the dorsal margin of the scutellum is open. The anterior half of the pronotum strongly arched and the posterior half flattened.

Distribution: Found only at the north-east coast of West Papua, West of Jayapura.

### Key to species of *Willemsetettix* gen. nov.

- 1 Posterior apex of the pronotum, in dorsal view, slightly convex ..... 2
- Posterior apex of the pronotum emarginated, sulcated or almost straight ..... 3
- 2 Anterior apex of the pronotum extending over the head ..... *Willemsetettix laeensis* sp. nov.
- Anterior apex of the pronotum straight ..... *Willemsetettix wauensis* sp. nov.
- 3 Furcation of the fascial carinae absent ..... *Willemsetettix willemsei* sp. nov.
- Furcation of the fascial carinae present ..... 4
- 4 Median carina, in lateral view, increasing in the anterior third and descending to the posterior apex .....  
..... *Willemsetettix missai* sp. nov.
- Median carina, in lateral view, arched in the anterior half. The posterior half slightly flattened .....  
..... *Willemsetettix oriomoensis* sp. nov.

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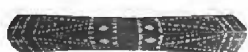


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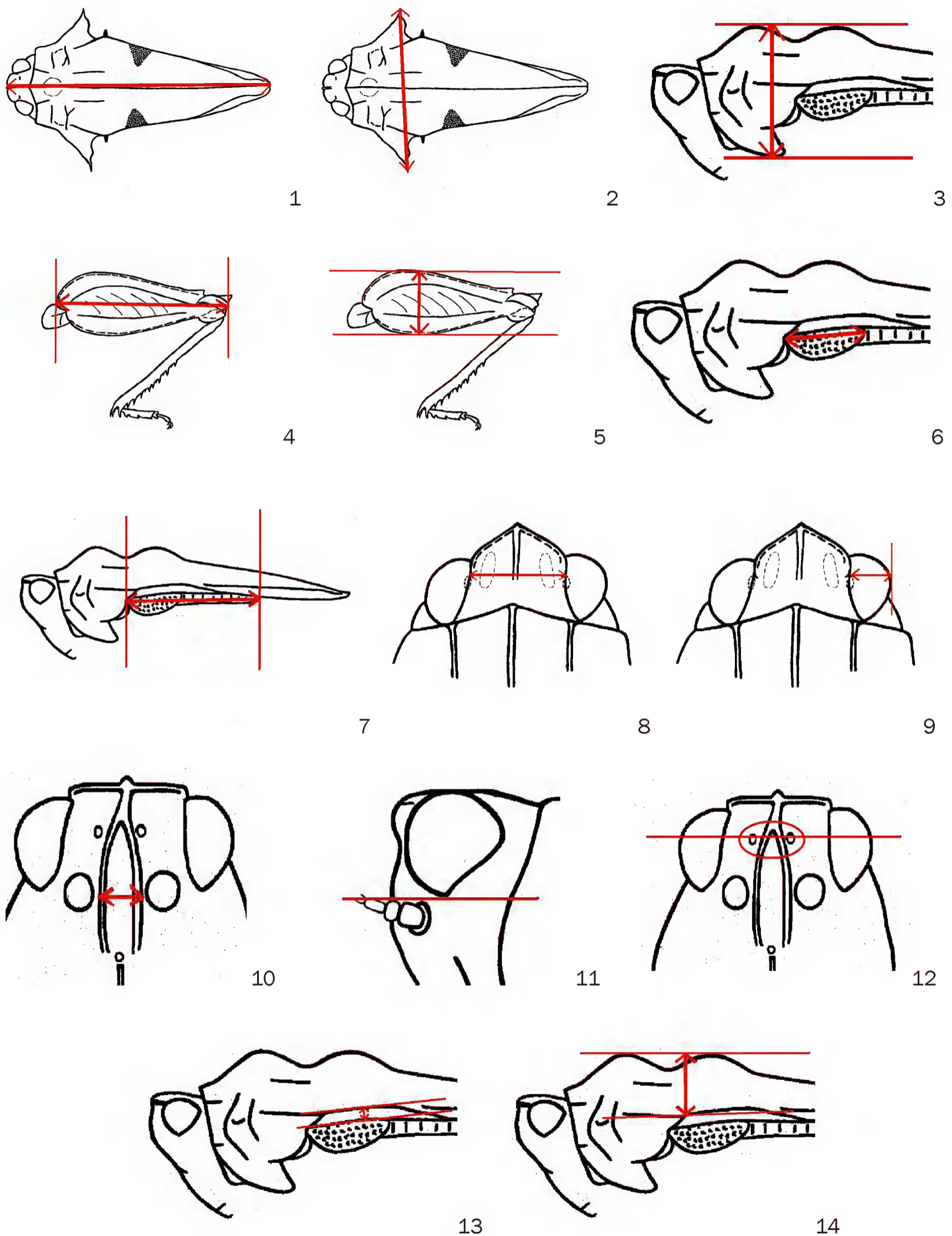


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Plate 64

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Figures 1-14. Measurements and characters of Tetrigidae.

1 - Pronotum length; 2 - Pronotum lobe width; 3 - Pronotum height (above the lateral lobes = new character); 4 - Postfemur length; 5 - Postfemur width; 6 - Tegmen length; 7 - Hind wing length; 8 - Vertex width; 9 - Eye width; 10 - Scutellum width; 11 - Position of the antennal grooves; 12 - Position of the furcation of the frontal costa and the superior ocelli; 13 - Infrascapular area height; 14 - Pronotum height (above the shoulders = old character).

Plate 65

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Figures 1-9. *Boczkitettix* gen. nov., habitus and head. 1, 3, 5 - *Boczkitettix borneensis* (Günther, 1935) comb. nov., ♀ NHME; 2, 4, 6 - *Boczkitettix manokwariensis* (Günther, 1935) sp. nov., holotype ♀ BPBM; 7-9 - *B. manokwariensis* sp. nov., paratype ♂ (1/3) BPBM.

Plate 66

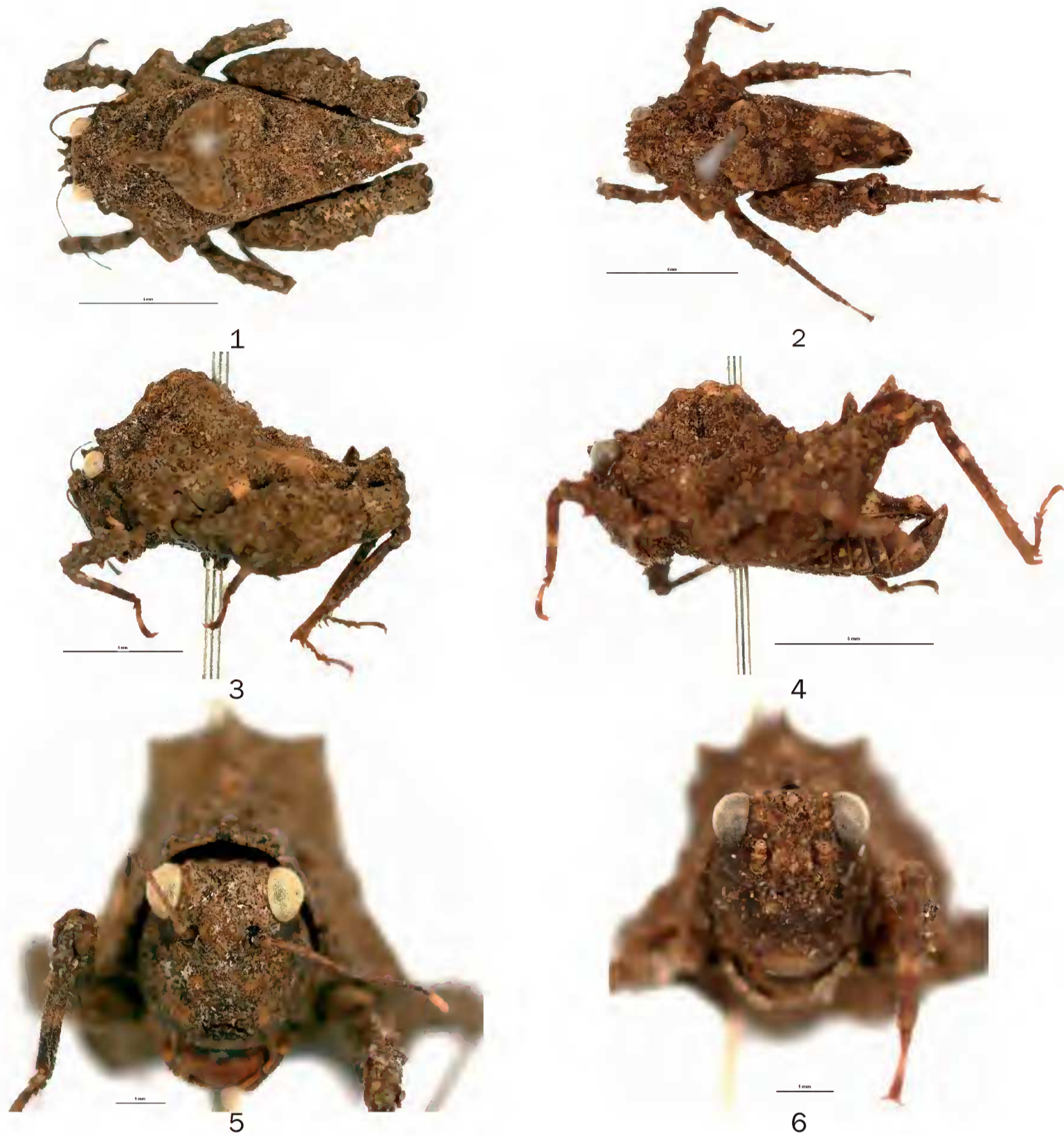
TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-7. *Bufonides antennatus* Bolívar, 1898, habitus, head and genitalia. 1, 3-5 – *B. antennatus*, paratype ♀ (1/3) MSNG (4- genitalia and antenna); 2, 6-7 – *B. antennatus*, holotype ♂ MSNG (2- genitalia).

**Plate 67**

TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...

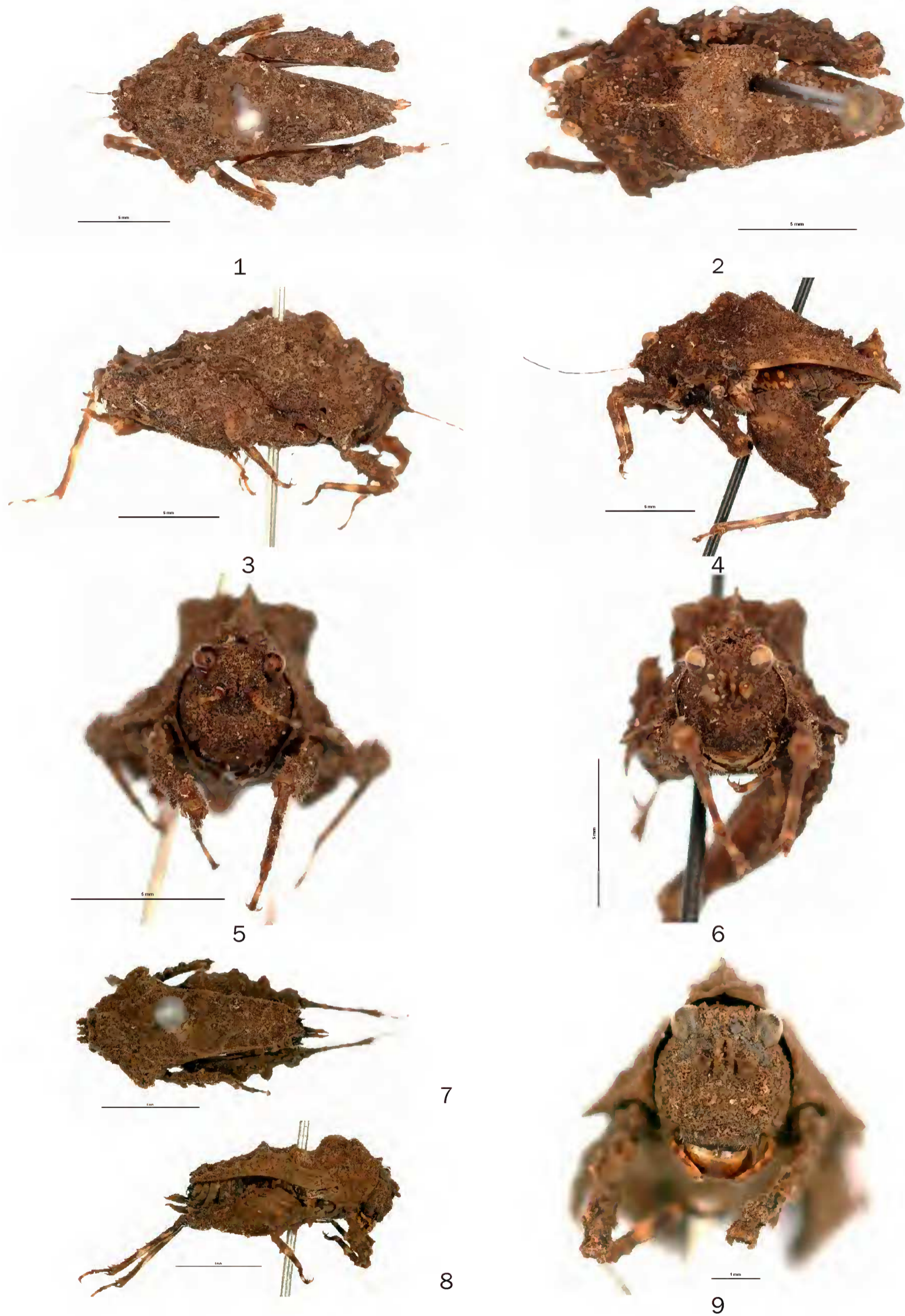


Figures 1-6. *Cladonotella beccarii* (Bolívar, 1898), habitus and head. 1, 3, 5 – *C. beccarii*, holotype ♀ MSNG; 2, 4, 6 – *C. insulana* Willemsse, 1961 syn. nov. of *C. beccarii*, ♂ NCB-RMNH.



Plate 68

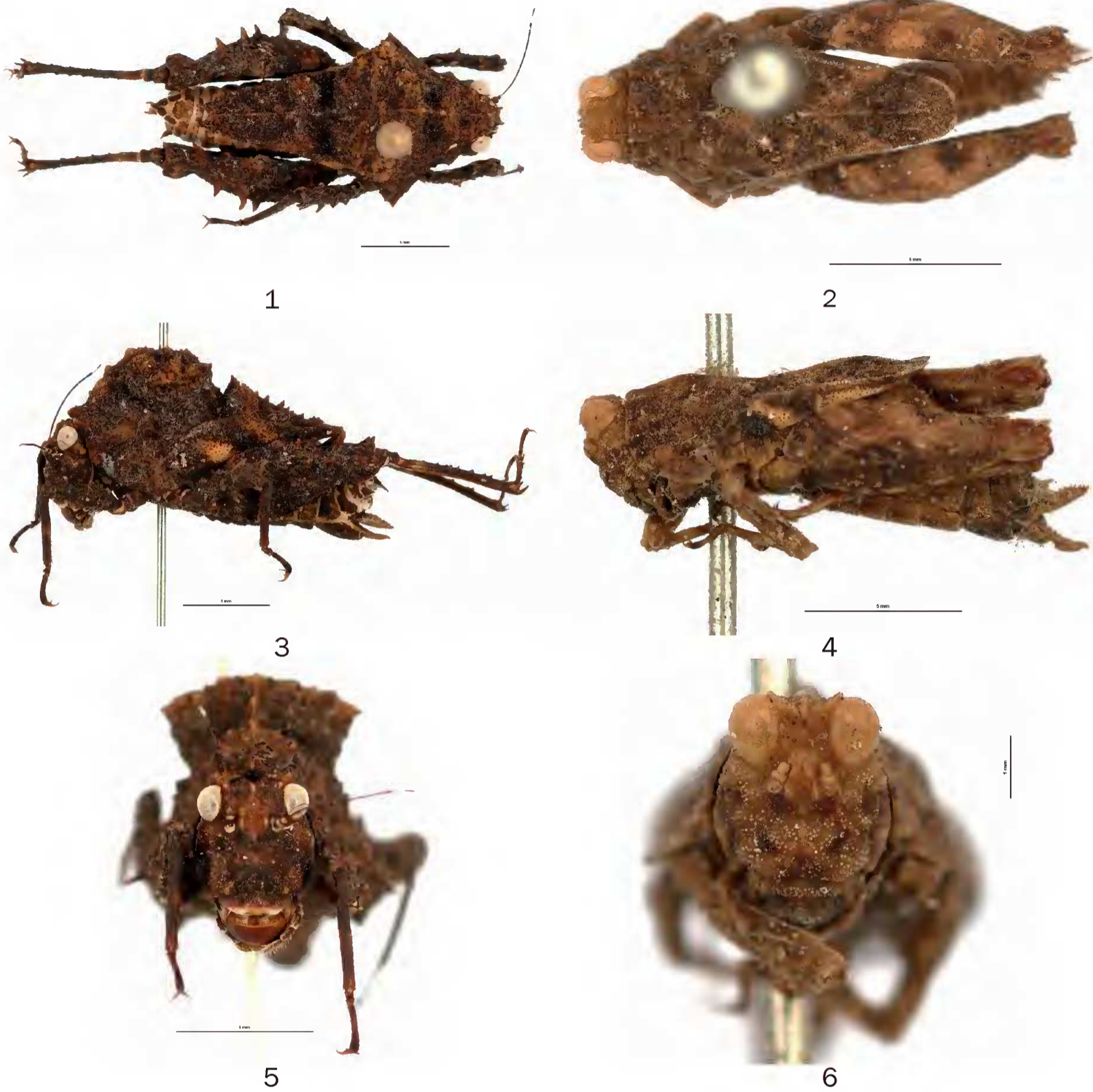
TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-9. *Cladonotella gibbosa* (Haan, 1842) and *Cladonotella interrupta* (Bolívar, 1898), habitus and head. 1, 3, 5 - *C. gibbosa*, ♀ SMTD from G. Pantjar; 2, 4, 6 - *C. gibbosa*, ♂ ANSP; 7-9 - *C. interrupta*, holotype ♀ MSNG.

Plate 69

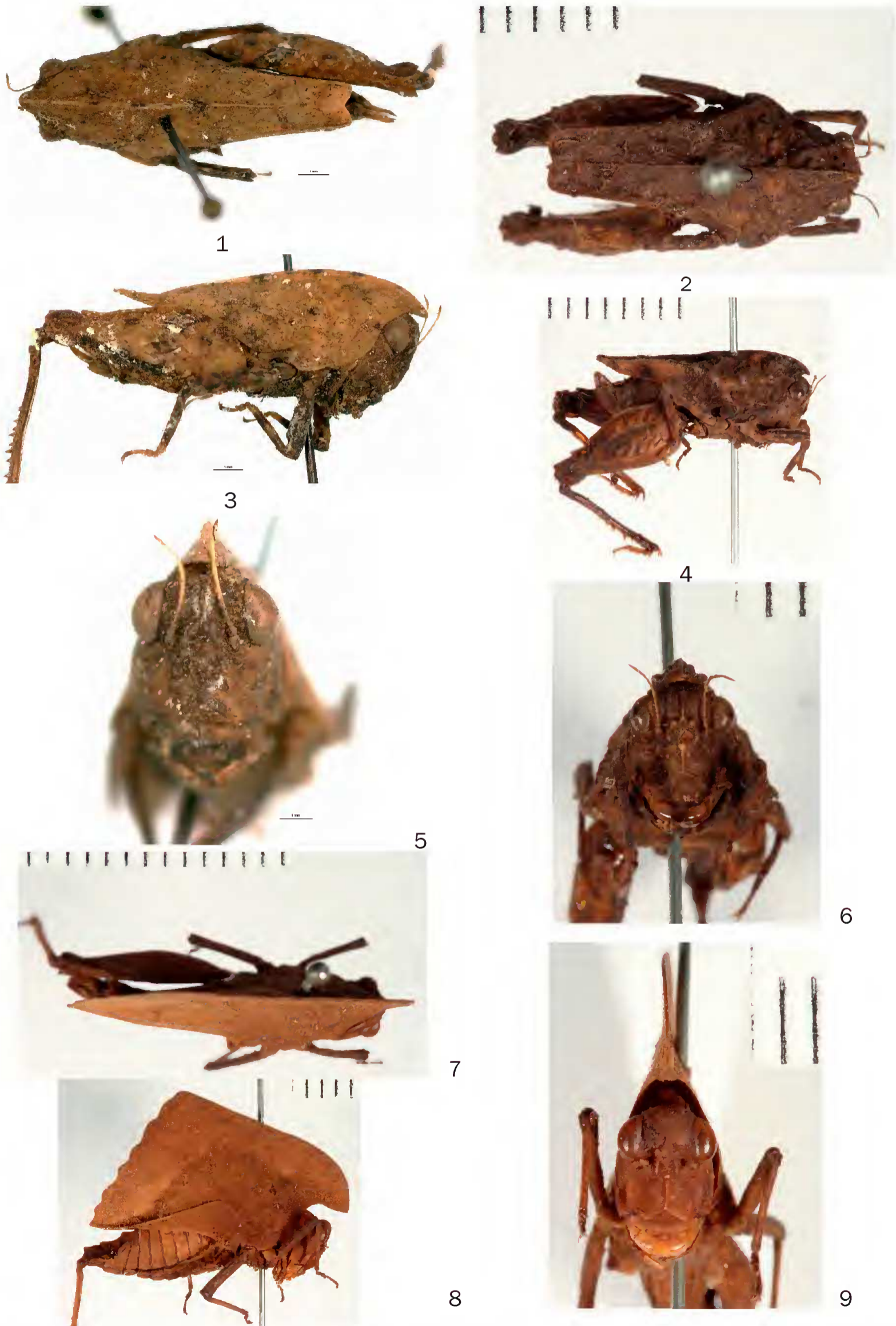
TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-6. *Cladonotella riedeli* sp. nov. and *Devriesetettix dorreus* (Hancock, 1909), habitus and head. 1, 3, 5 - *C. riedeli* sp. nov., holotype ♀ ZSM; 2, 4, 6 - *D. dorreus*, holotype ♂ OUMNH.

Plate 70

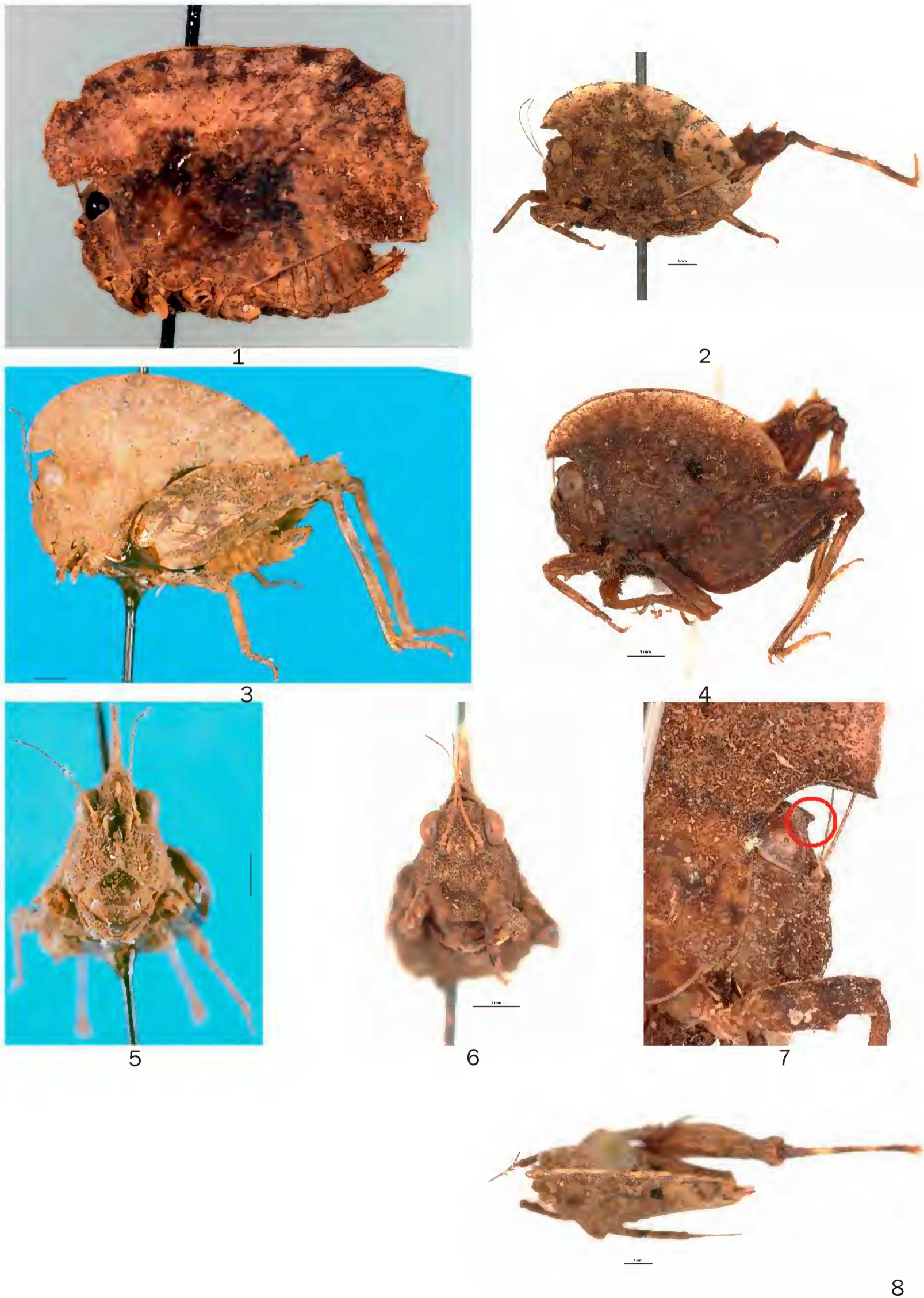
TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-9. *Diotarus* Stål, 1877 and *Hypsaeus westwoodi* Bolívar, 1887, habitus and head. 1, 3, 5 - *Diotarus ikonnikovi* Bey-Bienko, 1935, paratype ♂ NHME; 2, 4, 6 - *Diotarus verrucifer* Stål, 1877, holotype ♂ NHRS; 7-9 - *Hypsaeus westwoodi*, holotype ♂ NHRS.

**Plate 71**

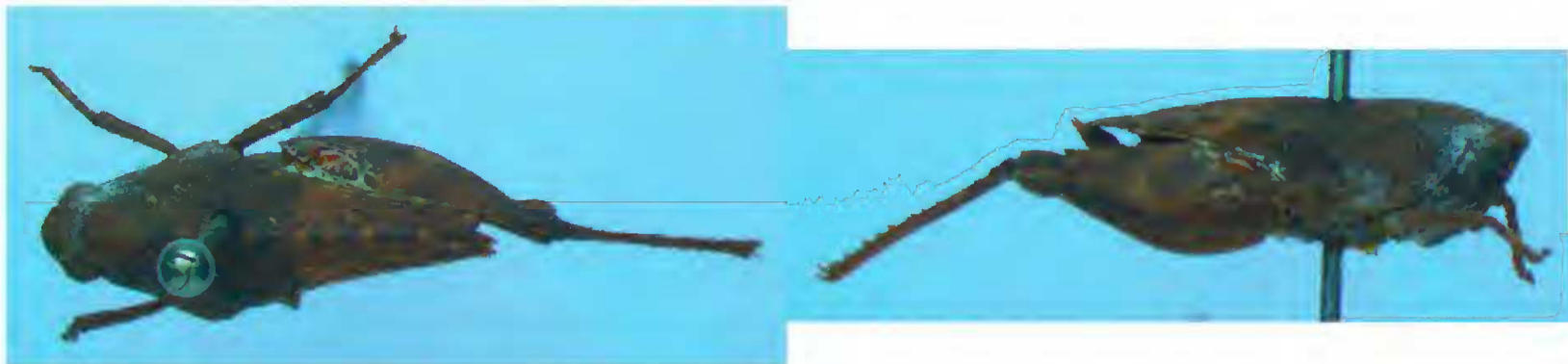
TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-8. *Dolatettix* Hancock, 1907, habitus, head and abdomen. 1 - *D. spinifrons* Hancock, 1913, holotype ♀ ANSP (photo: J.D. Weintraub); 2 - *D. hochkirchi* sp. nov., paratype ♂ BPBM; 3, 5 - *D. lehmanni* sp. nov., holotype ♀ ZMHU (photo: S. Ingrisch); 4, 6, 8 - *D. hochkirchi* sp. nov., holotype ♀ BPBM; 7 - *D. spinifrons*, ♀ UMB.

Plate 72

TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



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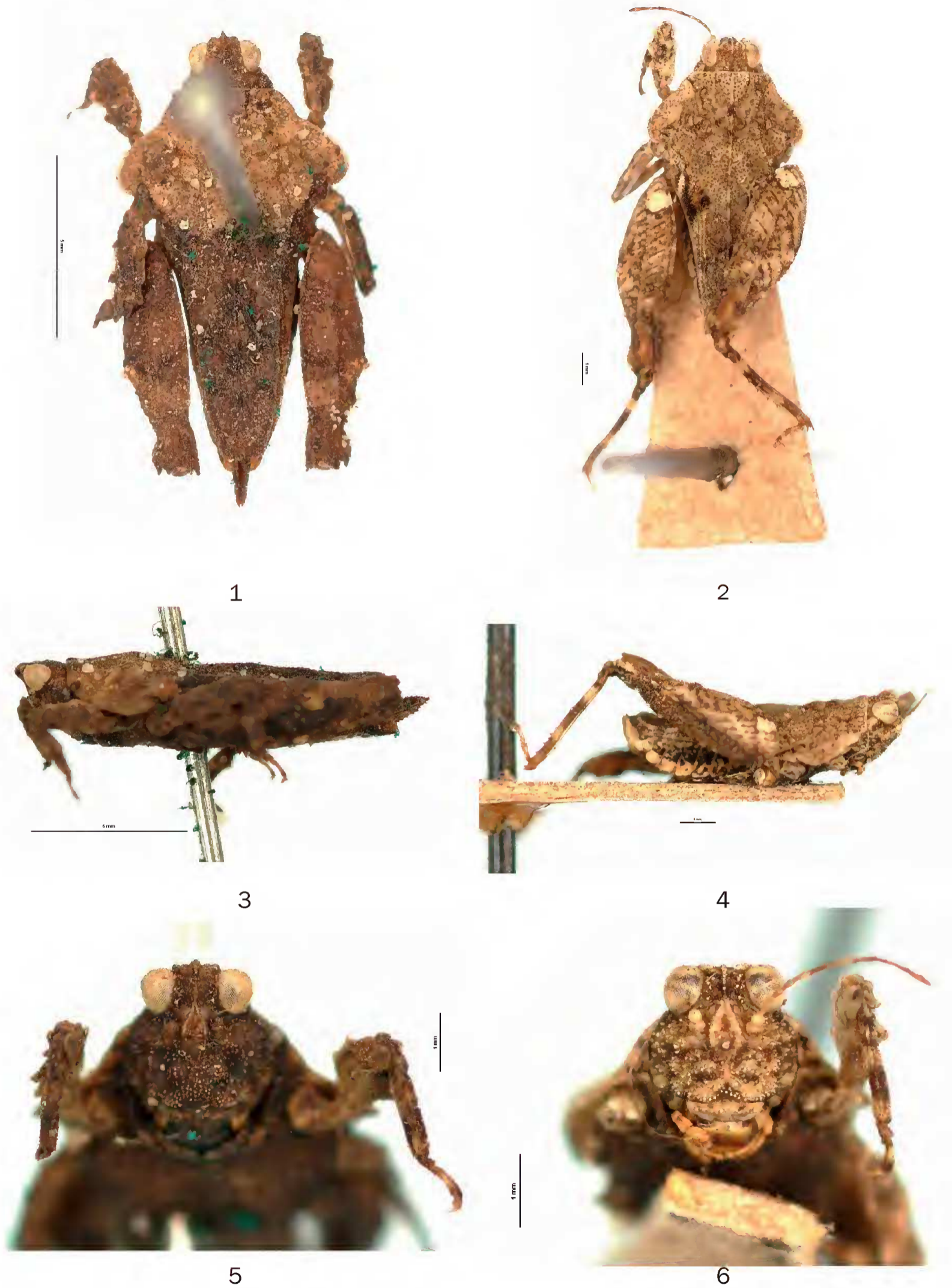
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Figures 1-9. *Epitettix* Hancock, 1907, habitus and head. 1-2, 7 - *E. emarginatus* (Haan, 1842), holotype ♀ NCB-RMNH; 3-4, 8 - *E. emarginatus* (Haan, 1842), ♂ BPBM; 5-6, 9 - *E. humilicolus* Günther, 1938, ♀ ZMHU.

Plate 73

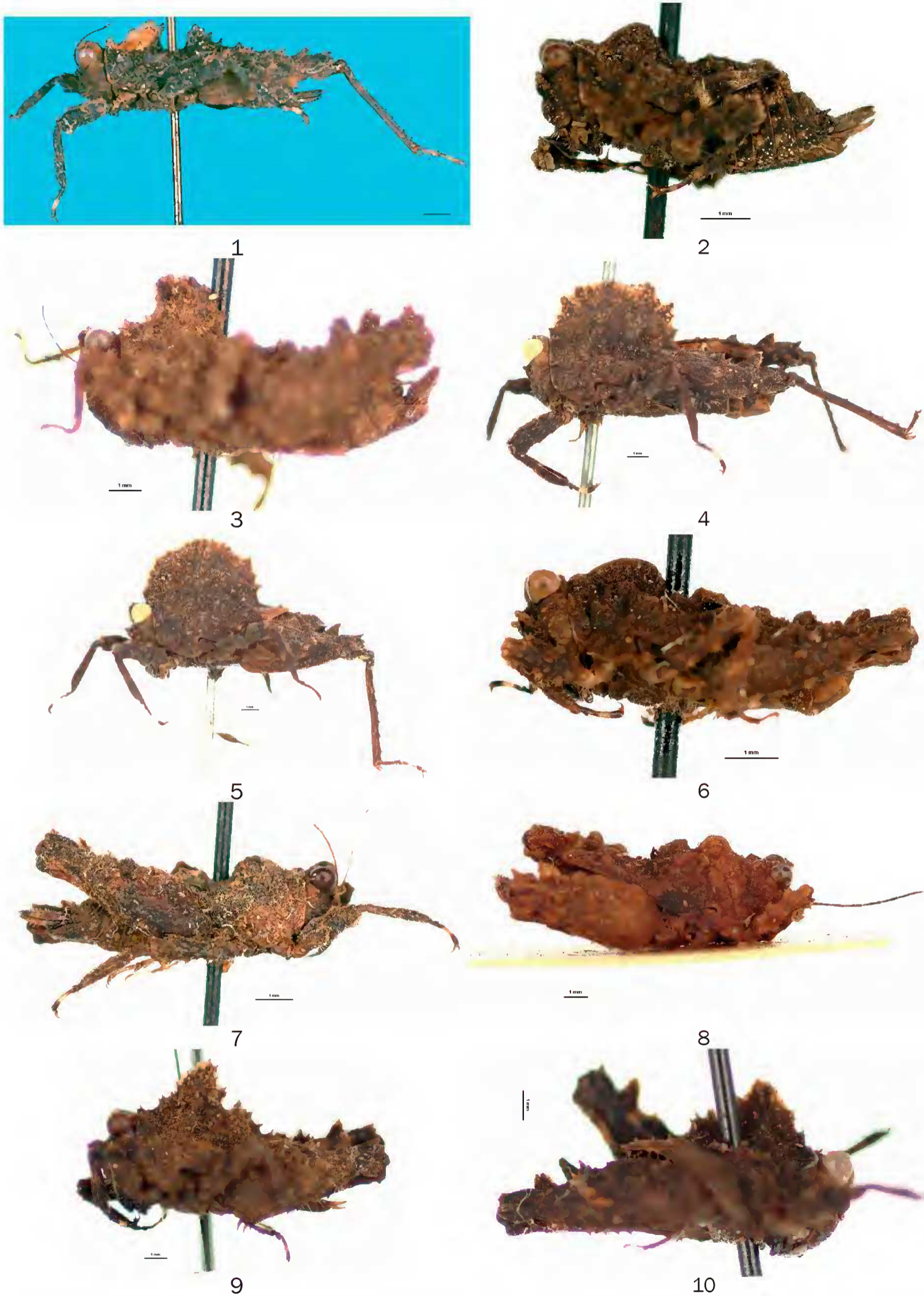
TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-6. *Eurymorphopus* Hancock, 1907. 1, 3, 5 - *E. bolivariensis* sp. nov., holotype ♀ MHNG; 2, 4, 6 - *E. cunctatus* (Bolívar, 1887), syntype ♂ IRSNB.

Plate 74

TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-10. *Gestroana* Berg, 1897, habitus in lateral view. 1 - *G. bicristulata* (Günther, 1938) comb. nov., holotype ♀ ZMHU (photo: S. Ingrisich); 2 - *G. baierriveriensis* sp. nov., holotype ♀ BPBM; 3 - *G. cycloensis* sp. nov., holotype ♀ BPBM; 4 - *G. discoidea* Berg, 1898, holotype ♂ MSNG; 5 - *G. discoidea* Berg, 1898, paratype ♀ MNCN; 6 - *G. flasbarthi* sp. nov., holotype ♂ BPBM; 7 - *G. gressitti* sp. nov., holotype ♀ BPBM; 8 - *G. yapenensis* sp. nov., holotype ♀ BMNH; 9 - *G. karimuiensis* sp. nov., holotype ♀ BPBM; 10 - *G. karimuiensis* sp. nov., paratype ♂ BPBM.

## Plate 75

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Figures 1-8. *Gestroana* Berg, 1897, habitus in lateral view. 1 - *G. kleukersi* sp. nov., holotype ♀ NCB-RMNH; 2 - *G. moanemaniensis* sp. nov., holotype ♂ BPBM; 3 - *G. morobensis* sp. nov., holotype ♀ BPBM; 4 - *G. mounthagensis* sp. nov., holotype ♂ BPBM; 5 - *G. pannosa* sp. nov., holotype ♀ BPBM; 6 - *G. sedlaceki* sp. nov., holotype ♀ BPBM; 7 - *G. willemsei* sp. nov., holotype ♂ NCB-RMNH; 8 - *G. willemsei* sp. nov., paratype ♀ (1/9) NCB-RMNH.



## Plate 76

TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-9. *Gastroana* Berg, 1897, habitus in dorsal view. 1 - *G. baiyerriveriensis* sp. nov., holotype ♀ BPBM; 2 - *G. cycloensis* sp. nov., holotype ♀ BPBM; 3 - *G. discoidea* Berg, 1898, holotype ♂ MSNG; 4 - *G. discoidea* Berg, 1898, paratype ♀ MNCN; 5 - *G. flasbarthi* sp. nov., holotype ♂ BPBM; 6 - *G. gressitti* sp. nov., holotype ♀ BPBM; 7 - *G. yapenensis* sp. nov., holotype ♀ BMNH; 8 - *G. karimuiensis* sp. nov., holotype ♀ BPBM; 9 - *G. karimuiensis* sp. nov., paratype ♂ BPBM.

## Plate 77

TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-8. *Gastroana* Berg, 1897, habitus in dorsal view. 1 - *G. kleukersi* sp. nov., holotype ♀ NCB-RMNH; 2 - *G. moanemaniensis* sp. nov., holotype ♂ BPBM; 3 - *G. morobensis* sp. nov., holotype ♀ BPBM; 4 - *G. mounthagensis* sp. nov., holotype ♂ BPBM; 5 - *G. pannosa* sp. nov., holotype ♀ BPBM; 6 - *G. sedlaceki* sp. nov., holotype ♀ BPBM; 7 - *G. willemsei* sp. nov., holotype ♂ NCB-RMNH; 8 - *G. willemsei* sp. nov., paratype ♀ (1/9) NCB-RMNH.

## Plate 78

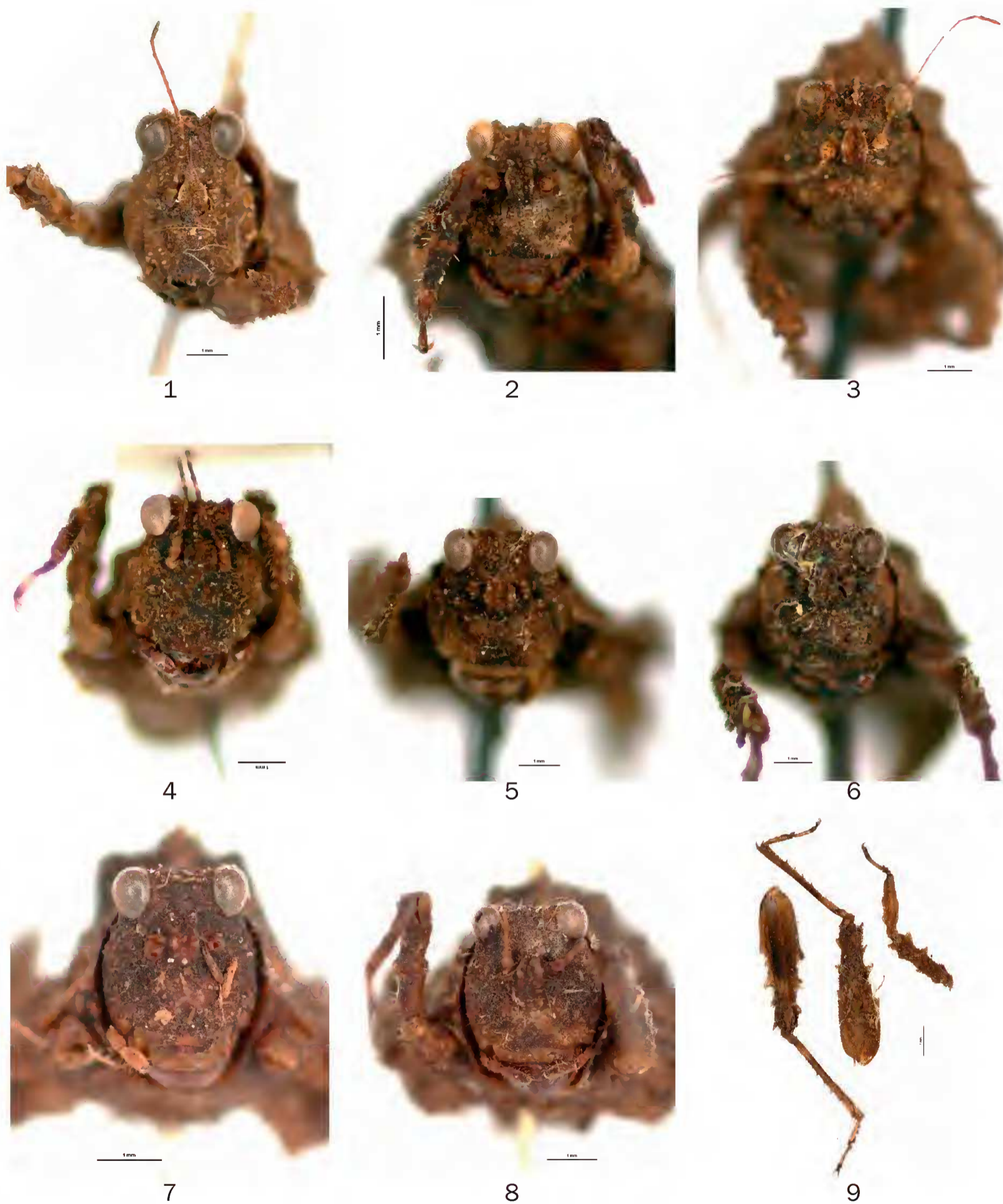
TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-9. *Gastroana* Berg, 1897, head in frontal view. 1 - *G. baiyerriveriensis* sp. nov., holotype ♀ BPBM; 2 - *G. cyclopiensis* sp. nov., holotype ♀ BPBM; 3 - *G. discoidea* Berg, 1898, holotype ♂ MSNG; 4 - *G. discoidea* Berg, 1898, paratype ♀ MNCN; 5 - *G. flasbarthi* sp. nov., holotype ♂ BPBM; 6 - *G. gressitti* sp. nov., holotype ♀ BPBM; 7 - *G. yapenensis* sp. nov., holotype ♀ BMNH; 8 - *G. karimuiensis* sp. nov., holotype ♀ BPBM; 9 - *G. karimuiensis* sp. nov., paratype ♂ BPBM.

## Plate 79

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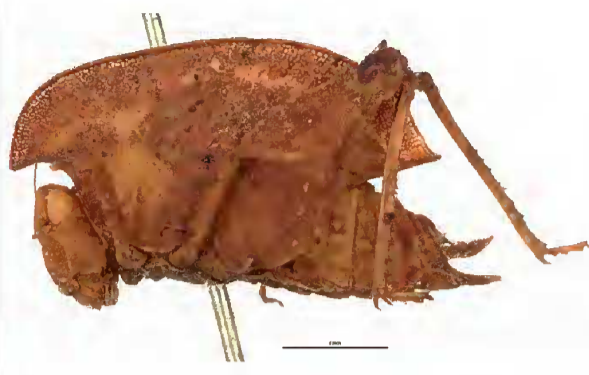
Figures 1-9. *Gastroana* Berg, 1897, head in frontal view and legs. 1 - *G. kleukersi* sp. nov., holotype ♀ NCB-RMNH; 2 - *G. moanemaniensis* sp. nov., holotype ♂ BPBM; 3 - *G. morobensis* sp. nov., holotype ♀ BPBM; 4 - *G. mounthagensis* sp. nov., holotype ♂ BPBM; 5 - *G. pannosa* sp. nov., holotype ♀ BPBM; 6 - *G. sedlaceki* sp. nov., holotype ♀ BPBM; 7 - *G. willemsei* sp. nov., holotype ♂ NCB-RMNH; 8 - *G. willemsei* sp. nov., paratype ♀ (1/9) NCB-RMNH; 9 - *G. kleukersi* sp. nov., holotype ♀ NCB-RMNH.

Plate 80

TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



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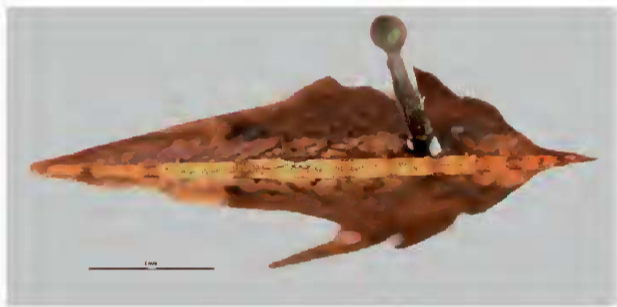
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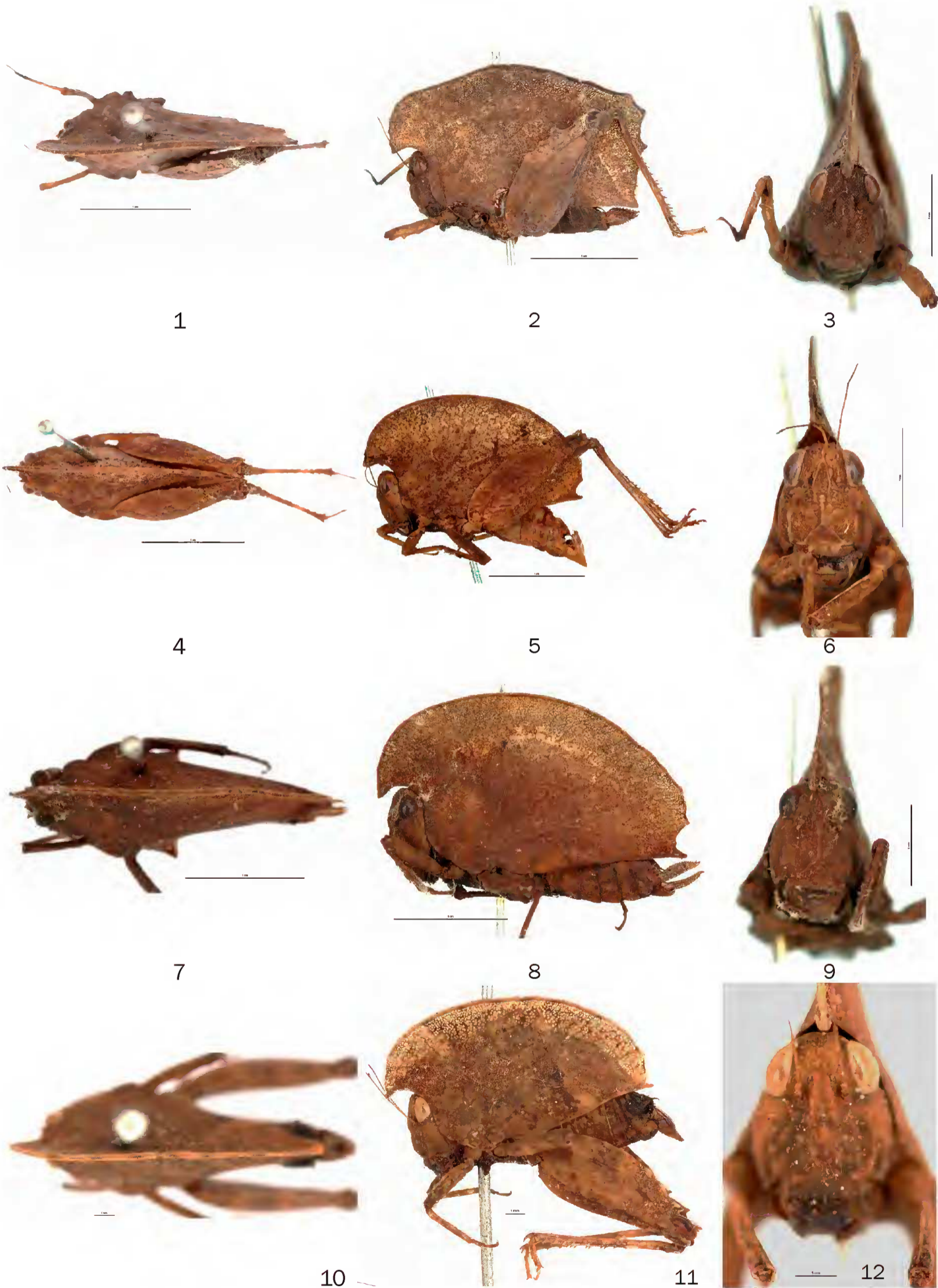


13

Figures 1-13. *Holoarcus* Hancock, 1909, habitus in dorsal and lateral view, head, abdomen and legs. 1-3 - *H. altinotus* Hancock, 1909, holotype ♀ OUMNH; 4-6 - *H. arcuatus* (Haan, 1842), paralectotype ♂ NCB-RMNH; 7-9 - *H. arcuatus* (Haan, 1842), lectotype ♀ OUMNH; 10-12 - *H. ferwillemsi* (Willemse, 1932) nom. nov., holotype ♂ IRSNB; 13 - *H. belingae* (Günther, 1929), holotype ♂ ZMHU (photo: S. Ingrisch).

Plate 81

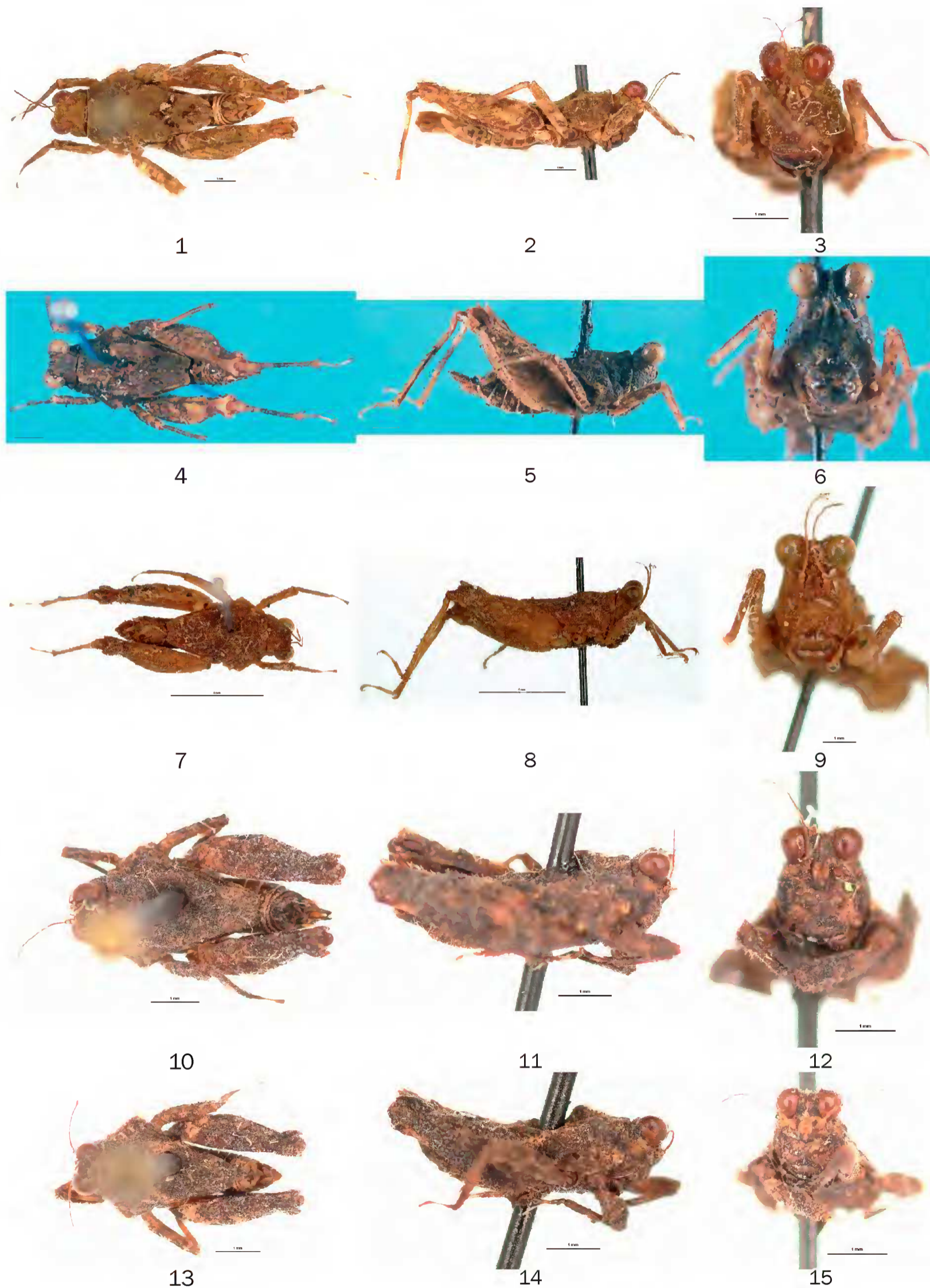
TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-12. *Holoarcus* Hancock, 1909, habitus in dorsal and lateral view, head. 1-3 - *H. ferwillemsei* (Willemse, 1932) nom. nov., paratype ♀ IRSNB; 4-6 - *H. intermedius* (Willemse, 1932) comb. nov., holotype ♂ IRSNB; 7-9 - *H. intermedius* (Willemse, 1932) comb. nov., paratype ♀ IRSNB; 10-12 - *H. truncatus* (Hancock, 1909) comb. nov., holotype ♂ OUMNH.

**Plate 82**

TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-15. *Ichikawatettix* gen. nov., habitus in dorsal and lateral view and head. 1-3 - *I. detzeli* sp. nov., holotype ♂ BPBM; 4-6 - *I. exsertus* (Günther, 1938), holotype ♀ ZMHU (photo: S. Ingrisch); 7-9 - *I. exsertus* (Günther, 1938), ♂ ZMHU; 10-12 - *I. kleinertae* sp. nov., holotype ♀ BPBM; 13-15 - *I. kleinertae* sp. nov., paratype ♂ BPBM.

Plate 83

TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...

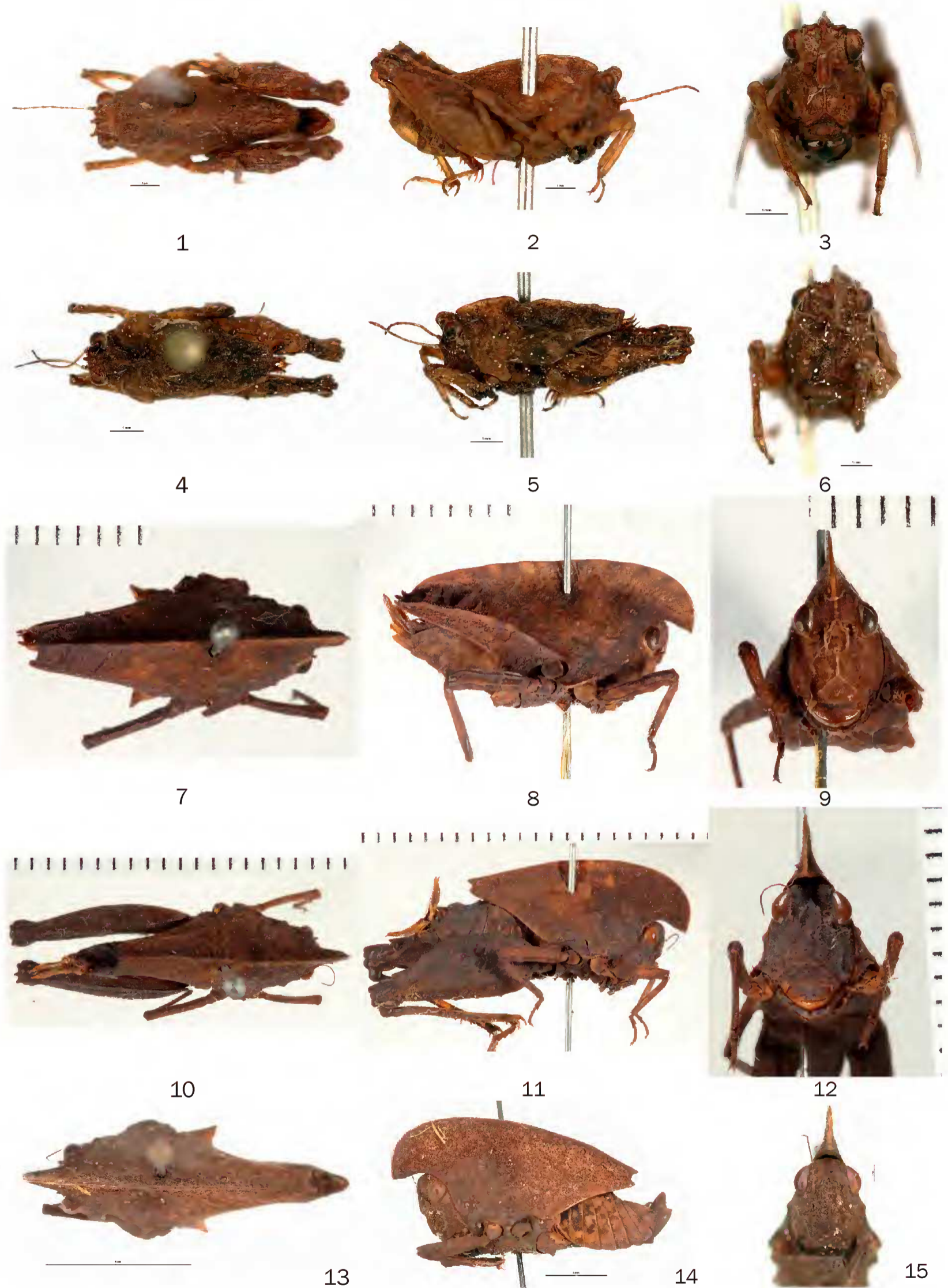


Figures 1-12. *Misythus* Stål, 1877, habitus in dorsal and lateral view and head. 1-3 - *M. echinatus* (Stål, 1877), holotype ♂ NHRS; 4-6 - *M. histrionicus* Stål, 1877 (synonym of *M. securifer* (Walker, 1871)), holotype ♂ NHRS; 7-9 - *M. histrionicus* Stål, 1877 (synonym of *M. securifer* (Walker, 1871)), allotype ♀ NHRS; 10-12 - *M. laminatus laminatus* Stål, 1877, holotype ♂ NHRS.



Plate 84

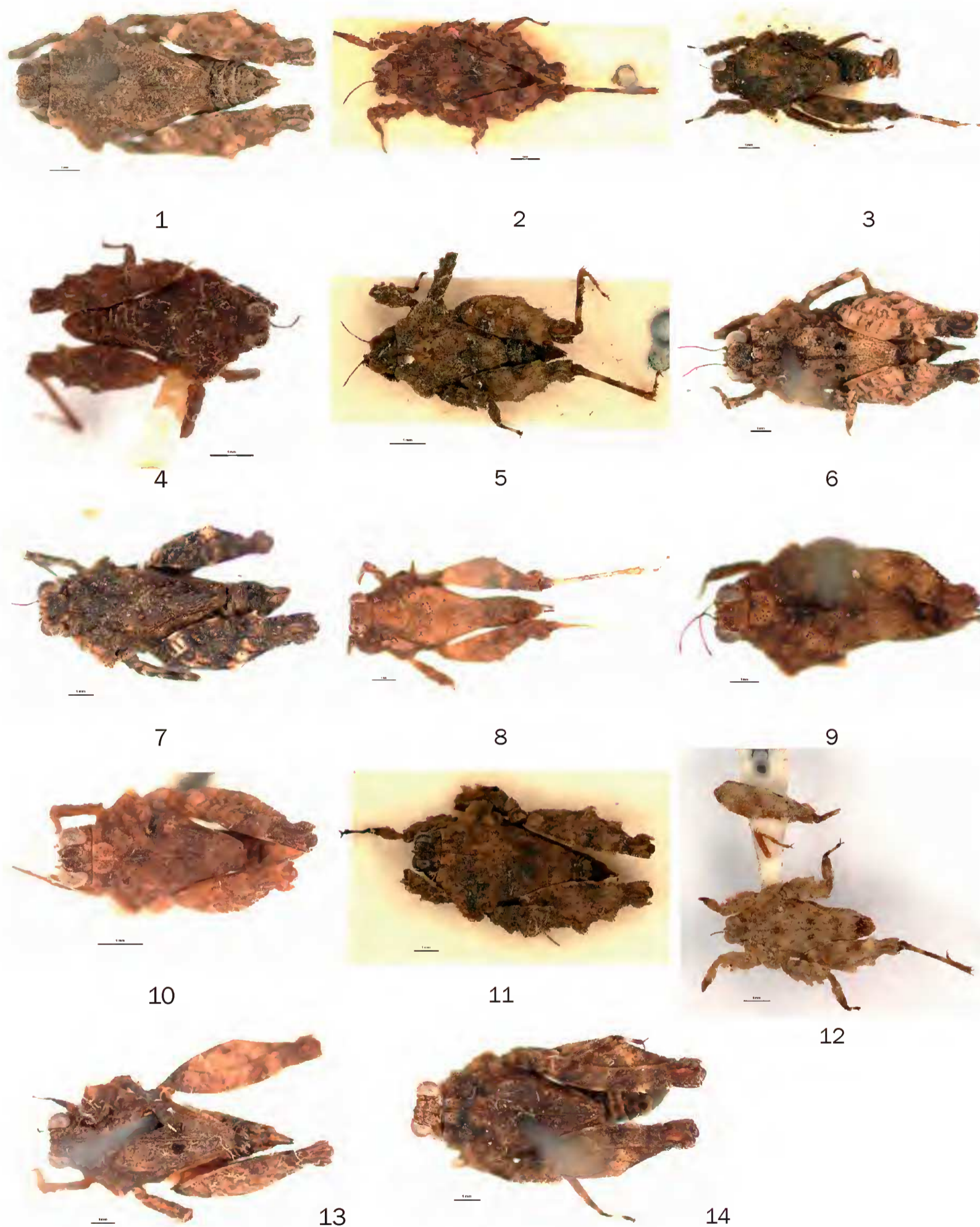
TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-15. *Ingrischitettix mountalbilalaensis* sp. nov. and *Piezotettix* Bolívar, 1887, habitus in dorsal and lateral view and head. 1-3 - *I. mountalbilalaensis* sp. nov., holotype ♂ BPBM; 4-6 - *I. mountalbilalaensis* sp. nov., paratype ♀ BPBM; 7-9 - *Piezotettix cultratus* (Stål, 1877), holotype ♀ NHRS; 10-12 - *P. sulcatus* (Stål, 1877) comb. nov., holotype ♀ NHRS; 13-15 - *P. sulcatus* (Bolívar, 1887) comb. nov., ♂ NCB-RMNH.

**Plate 85**

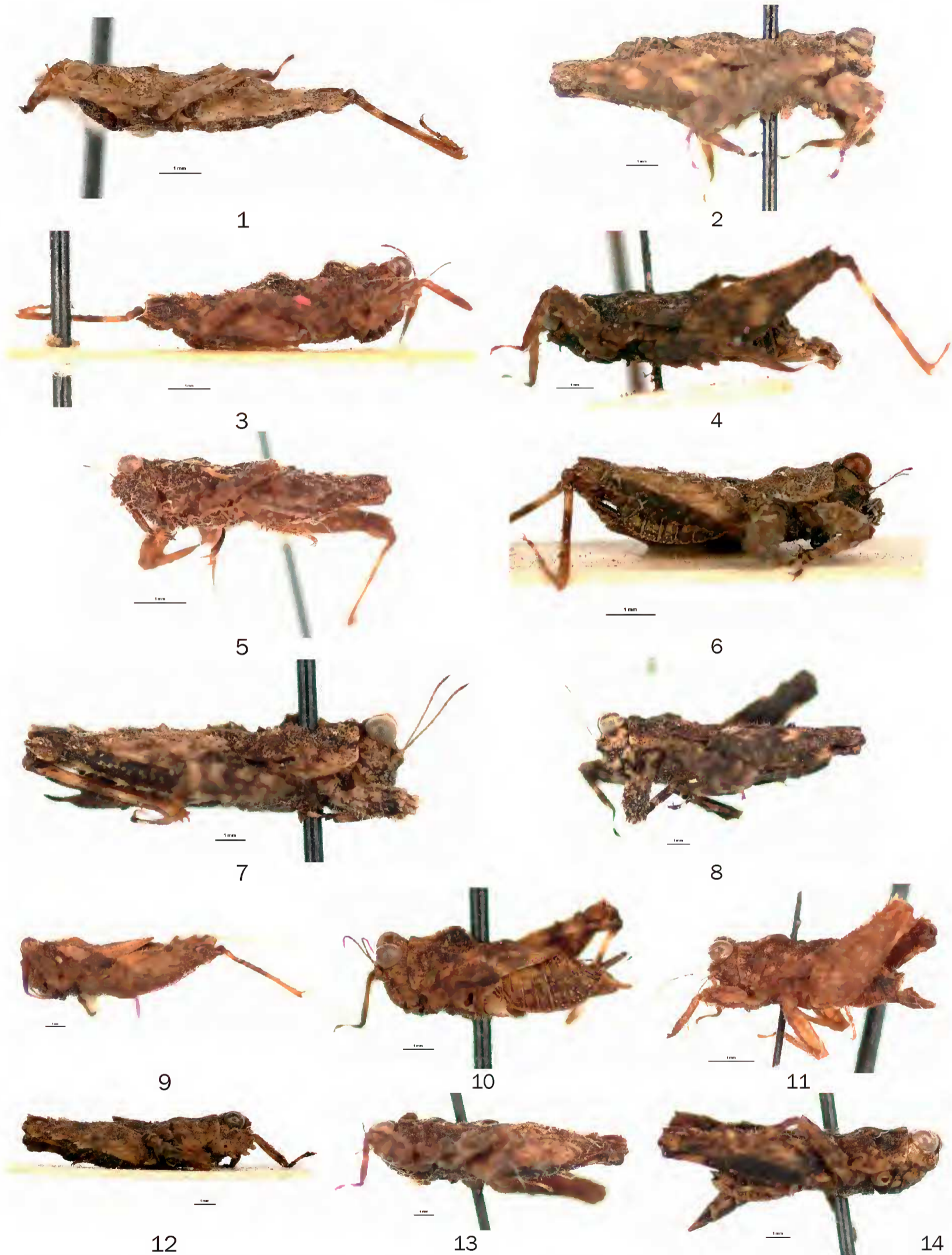
TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-14. *Planotettix* gen. nov., habitus in dorsal view. 1 – *P. astrolabebayensis* sp. nov., holotype ♀ HNHM; 2 – *P. biroi* sp. nov., holotype ♀ BPBM; 3 – *P. buergersi* sp. nov., holotype ♂ ZMHU; 4 – *P. cyclopensis* sp. nov., holotype ♂ BPBM; 5 – *P. cyclopensis* sp. nov., paratype ♀ (3/10) BMNH; 6 – *P. fartmanni* sp. nov., holotype ♀ UCDC; 7 – *P. fartmanni* sp. nov., paratype ♂ (3/6) UCDC; 8 – *P. karubakensis* sp. nov., holotype ♀ BPBM; 9 – *P. maai* sp. nov., holotype ♀ BPBM; 10 – *P. maai* sp. nov., paratype ♂ (1/1) BPBM; 11 – *P. mountbaduriensis* sp. nov., holotype ♀ BMNH; 12 – *P. planus* sp. nov., holotype ♂ BPBM; 13 – *P. riedei* sp. nov., holotype ♀ BPBM; 14 – *P. riedei* sp. nov., paratype ♂ (3/4) BPBM.

Plate 86

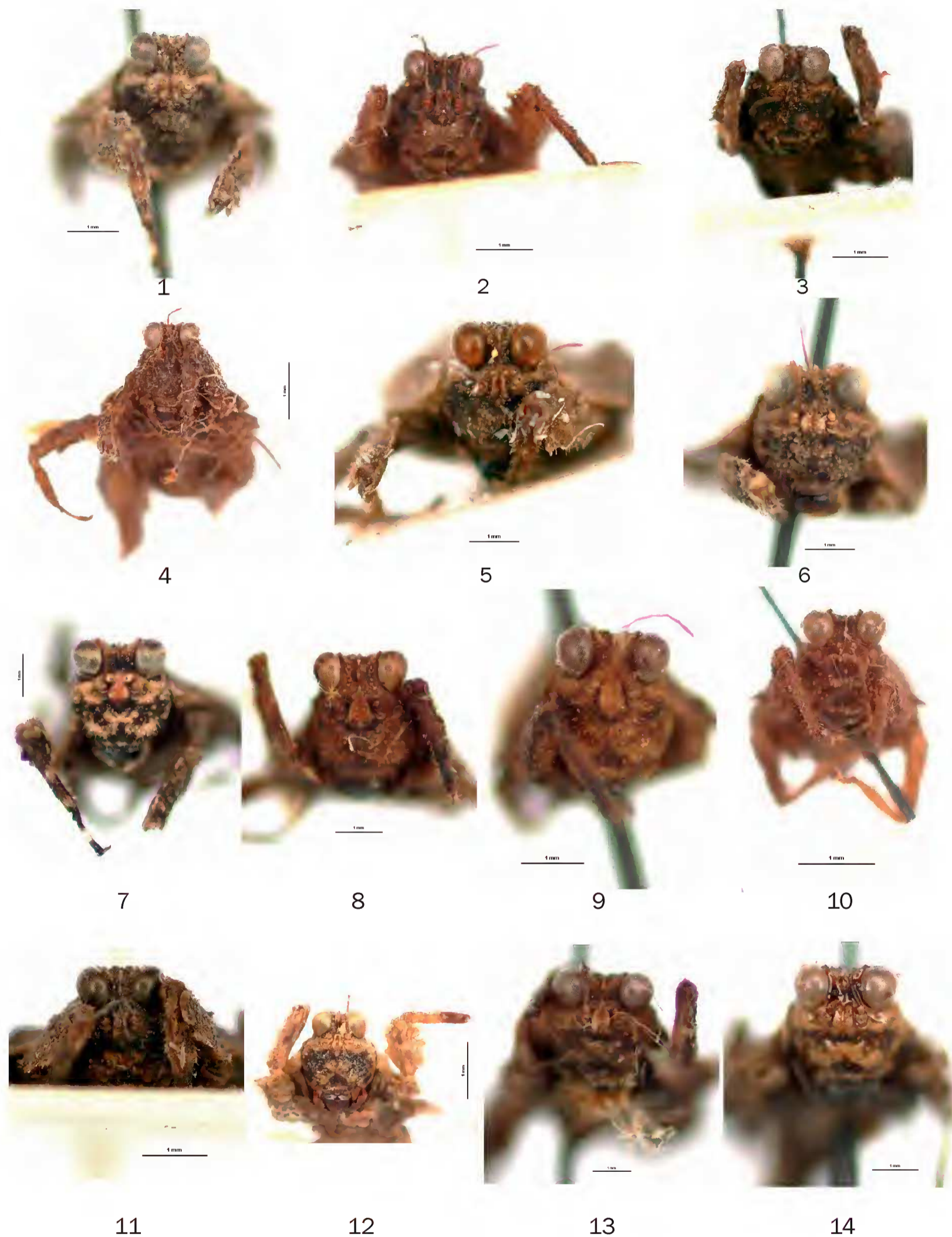
TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-14. *Planotettix* gen. nov., habitus in lateral view. 1 - *P. planus* sp. nov., holotype ♂ BPBM; 2 - *P. astrola-bebayensis* sp. nov., holotype ♀ HNHM; 3 - *P. biroi* sp. nov., holotype ♀ BPBM; 4 - *P. buergersi* sp. nov., holotype ♂ ZMHU; 5 - *P. cycloperensis* sp. nov., holotype ♂ BPBM; 6 - *P. cycloperensis* sp. nov., paratype ♀ (3/10) BMNH; 7 - *P. fartmanni* sp. nov., holotype ♀ UCDC; 8 - *P. fartmanni* sp. nov., paratype ♂ (3/6) UCDC; 9 - *P. karubakensis* sp. nov., holotype ♀ BPBM; 10 - *P. maai* sp. nov., holotype ♀ BPBM; 11 - *P. maai* sp. nov., paratype ♂ (1/1) BPBM; 12 - *P. mountbaduriensis* sp. nov., holotype ♀ BMNH; 13 - *P. riedei* sp. nov., holotype ♀ BPBM; 14 - *P. riedei* sp. nov., paratype ♂ (3/4) BPBM.

**Plate 87**

TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-14. *Planotettix* gen. nov., head in frontal view. 1 – *P. astrolabebayensis* sp. nov., holotype ♀ HHNM; 2 – *P. biroi* sp. nov., holotype ♀ BPBM; 3 – *P. buergersi* sp. nov., holotype ♂ ZMHU; 4 – *P. cycloensis* sp. nov., holotype ♂ BPBM; 5 – *P. cycloensis* sp. nov., paratype ♀ (3/10) BMNH; 6 – *P. fartmanni* sp. nov., holotype ♀ UCDC; 7 – *P. fartmanni* sp. nov., paratype ♂ (3/6) UCDC; 8 – *P. karubakensis* sp. nov., holotype ♀ BPBM; 9 – *P. maai* sp. nov., holotype ♀ BPBM; 10 – *P. maai* sp. nov., paratype ♂ (1/1) BPBM; 11 – *P. mountbaduriensis* sp. nov., holotype ♀ BMNH; 12 – *P. planus* sp. nov., holotype ♂ BPBM; 13 – *P. riedei* sp. nov., holotype ♀ BPBM; 14 – *P. riedei* sp. nov., paratype ♂ (3/4) BPBM.

Plate 88

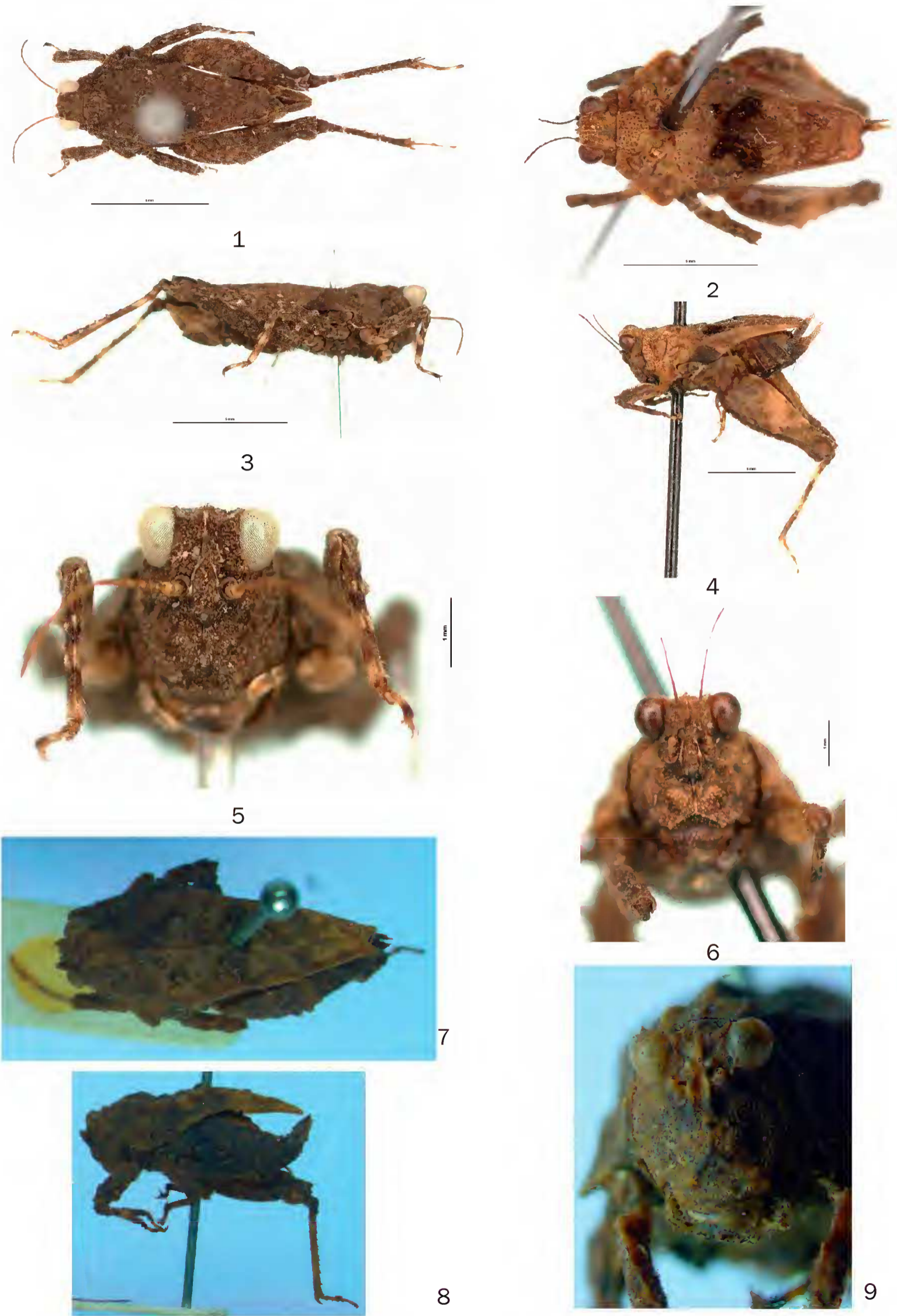
TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-15. *Potua* Bolívar, 1887, *Pseudohyboella weylandiana* Günther, 1938 and *Stegaceps brevicornis* Hancock, 1913, habitus in dorsal and lateral view and head. 1-3 - *Potua coronata coronata* Bolívar, 1887, syntype ♂ NHRS; 4-6 - *P. coronata sumatrensis* Bolívar, 1898, ♂ SMTD; 7-9 - *P. sabulosa* Hancock, 1915, holotype ♂ ANSP (photo : J.D. Weintraub); 10-12 - *Pseudohyboella weylandiana* Günther, 1938, ♂ BPBM; 13-15 - *Stegaceps brevicornis* Hancock, 1913, holotype ♀ ANSP (photo: J.D. Weintraub).

Plate 89

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Figures 1-9. *Tepperotettix reliquia* Rehn, 1952 and *Tondanotettix brevis brevis* (Haan, 1842), habitus in dorsal and lateral view and head. 1, 3, 5 - *Tepperotettix reliquia*, ♂ MHNG; 2, 4, 6 - *Tepperotettix reliquia*, ♀ AMS; 7-9 - *Tondanotettix brevis brevis* (Haan, 1842), holotype ♀ NCB-RMNH.

Plate 90

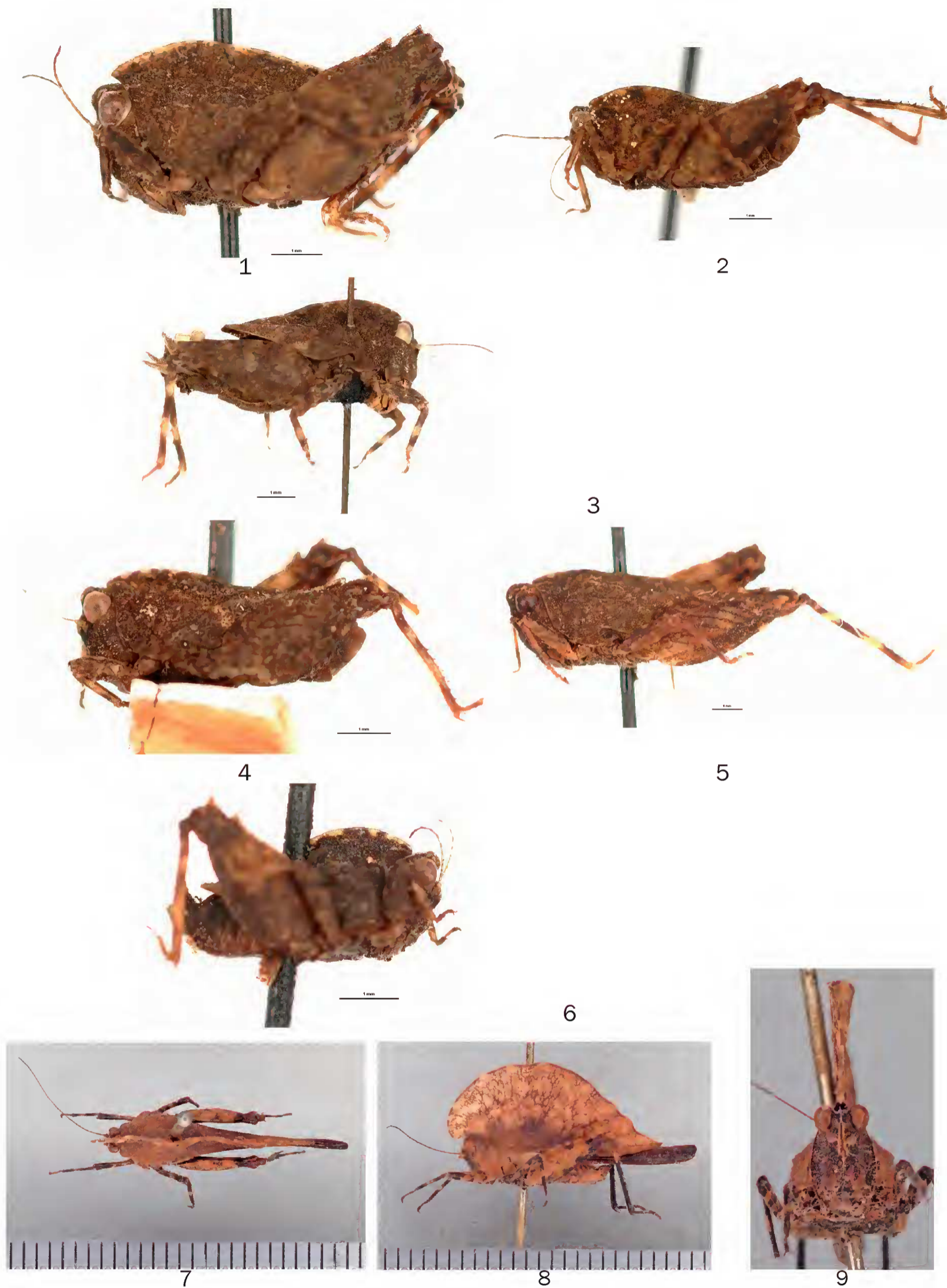
TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-12. *Willemsetettix* gen. nov., habitus in dorsal view and head. 1, 7 - *W. laeensis* sp. nov., holotype ♀ BPBM; 2, 8 - *W. missai* sp. nov., holotype ♀ IRSNB; 3, 9 - *W. missai* sp. nov., paratype ♂ (5/5) BPBM; 4, 10 - *W. orimoensis* sp. nov., holotype ♂ BPBM; 5, 11 - *W. wauensis* sp. nov., holotype ♀ BPBM; 6, 12 - *W. willemsei* sp. nov., holotype ♂ BPBM.

**Plate 91**

TUMBRINCK, J.: Taxonomic revision of the Cladonotinae (Orthoptera: Tetrigidae) from the islands of South-East Asia ...



Figures 1-9. *Willemsetettix* gen. nov. and *Paraphyllum antennatum* Hancock, 1913, habitus in dorsal and lateral view and head. 1 - *W. laeensis* sp. nov., holotype ♀ BPBM; 2 - *W. missai* sp. nov., paratype ♂ (5/5) BPBM; 3 - *W. missai* sp. nov., holotype ♀ IRSNB; 4 - *W. oriomoensis* sp. nov., holotype ♂ BPBM; 5 - *W. wauensis* sp. nov., holotype ♀ BPBM; 6 - *W. willemsei* sp. nov., holotype ♂ BPBM; 7-9 - *P. antennatum* Hancock, 1913, holotype ♀ ANSP (photo: J.D. Weintraub).